The Builder.

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The Architectural Profession and the Public.

THE demonstration which has been got up about the foolish Bill which has just been quashed in Parliament, however paltry the motives from which it originated, and however unprincipled the methods by which it was supported, has been indirectly the occasion for the expression of some opinions in regard to the profession of architecture which are worth taking into account; more especially the view of the subject which was so ably urged in the letters addressed to the *Times* last week by two of the most eminent architects of the day.

The abstract question of the advisability of rendering architecture a close profession is one which, no doubt, admits of profitable discussion, both from the point of view of architects and of the public. No doubt, if the subject were properly understood, it ought to be seen that the interests of the architects and the public are alike. Yet it is evident that by many persons they are regarded as naturally opposed to each other. In reality, it is for the interest of the public that architecture, as a form of intellectual artistic expression, should be carried to its highest development, as an art which, among all civilised and intellectually-cultivated peoples, has been regarded as one of the great glories of a nation; and it is needless to say that this view of the subject is also the one which it is the highest interest of the architect to maintain. But it is an unfortunate difficulty in the way of this mutual understanding, that in this generation the English public and the English press for the most part seem to have entirely ceased to care about architecture as an art, and regard it only as a profession concerned with drainage and construction. The latest scheme for a great national building has been cut down by our legislative body to a mere piece of utilitarian construction; and no one seems to think it a matter of the slightest consequence. The popular view is illustrated in the words used by Sir W. Foster (according to the brief report in the *Times*) in opposing the Bill referred to:—"He quite agreed that there was a crying necessity that some steps should be taken to make architects better acquainted with sanitary matters, but he did not see how this Bill would effect that object." This idea about the "crying necessity" of course only shows how completely ignorant the speaker must have been as to what is going on in the architectural profession; but apart from that, the point to be specially noted is that Sir W. Foster did not, if he is correctly reported, show the slightest perception that there was anything else of consequence to be considered in reference to the profession of architecture. This was the special point made by the mover of the second reading also:—"It was very necessary that sanitary questions should be properly treated, and they could not be properly treated by incapable men." Colonel Duncan is obviously entirely unacquainted with architecture, as we understand it, and entirely indifferent to it; all he goes upon is the supposed necessity of looking after the sanitary knowledge of architects; and in this he only represents the average public opinion of the day. So far has this gone, that it was an absolute surprise to us, as it probably was to others, to find an Attorney-General actually standing up for English architecture of the present day, protesting that it had during the last thirty or forty years made enormous progress (for we do not credit the learned gentleman with having really said, as is reported in the *Times*, that "the history of architecture had been enormously improved" of late), and that, "not being influenced by anything except his own knowledge," he thought the proposed measure one which the House ought not to pass without being informed of the evils which it was intended to remedy. This is no more than just the fair way of putting it; but architects in this country seldom get even that nowadays.

There would, of course, be no such divergence of view between professors and the public about such arts as painting and sculpture. In regard to these, which are purely arts, everybody knows that what we want is the development of artistic genius. The difficulty about architecture is that it is a dual thing; an art of which construction is the basis, and which arises out of construction. Of course every genuine architect thinks of the two elements of architecture in combination, and finds no pleasure in making designs independent of any definite plan or construction. But the public have never been able, it would seem, to take in the idea of the two elements and their mutual relation; and public opinion about what architecture is and what they want from it varies with the tendencies of each generation. In an earlier period of the present century there was a general popular notion that architecture was an art; it was thought, to be sure, that its great glory, in this sense, lay in repeating the artistic forms of other periods,—now Greek, now Gothic, which was a bounded and a mistaken view; but still the popular idea was that the function of architecture was to give us what were supposed to be beautiful buildings. In those days construction was left, as it is now, to the architects, for the public have never understood or cared anything about building construction; and as to sanitary science, it can hardly be said to have existed then, in the sense in which we regard it now. At present we are in a period of reaction in this latter respect. The efforts of various sanitary reformers, — efforts which we may claim to have assisted in some measure, —have drawn attention to the importance of a scientific system of drainage; and, without by any means saying that all has been done which can or ought to be done, it can hardly be denied that we are now living under almost a sanitary craze on the part of the public: sanitation has become popular, even with those who hardly understand what they are talking about, and there is a prevalent feeling that the drain-pipe is the centre and foundation of all architecture, and the only thing worth serious consideration.

If this were the true view of the subject, the question of the examination and registration of architects would be a very simple one. There would be no difficulty about it, and no important argument to be urged against it. But, of course, every one who knows what architecture really means knows very well that drainage is not the be-all and the end-all of architectural practice. On the contrary, it is only a subordinate portion of the architect's work. Preposterous as the statement may seem to the present generation, the real and important value of architecture to the world is as the art of making buildings things of beauty and expression. That is what architecture means: that is what it has meant in all those periods and countries when the buildings were produced which make the history of architecture a branch of intellectual study and a source of intellectual enjoyment. If it is not that it is nothing. The history of architecture is not the history of drainage It is to some extent the history of construction; but of construction only as clothed with artistic expression. That is the fact recognised by all the illustrative and historical treatises on architecture that have ever been produced. Rondelet called

his great work on construction "L'Art de Bâtir," but he did not call it "L'Architecture"; and our contemporary the *Athenæum*, in reviewing, a week or two ago, a certain book on "The Consulting Architect," rightly demurred to the term "architect" being used at all as describing a person supposed to be consulted only about dilapidations and the sale of property, and such matters. Art is what the world has all along considered architecture to mean; and as Johnson said, when the world has thought one way a long time it generally has thought right.

Now in regard to this essential element of architecture it is impossible to hold examinations or grant diplomas, because no examination can test the possession or the quality of artistic power, any more than a literary examination could test the possession of a poetic gift. If candidates for examination were made to produce a design as a test of their power of architectural origination it would, no doubt, be apparent from the results that some possessed more artistic feeling and ideas than others, and examiners could probably agree as to those which they thought the best and those which they thought the worst, but they could not fix a line below which candidates were not to pass, as they could in regard to answers to questions on construction and sanitation. The amount of art in the drawing itself cannot be gauged by any standard; and the maker of the poorest drawing may, in actually carrying out buildings, prove himself to have original perception and an eye for the picturesque. The accurate knowledge of style, as shown in designs made in accordance with existing styles, may be tested; but there is the very obvious objection to this that it is a recognising and even promoting of that very system of imitating past styles which we wish to see modern architecture emerge from, and it would be deliberately encouraging men to look on architecture as meaning special forms of design, instead of being an art which has its intellectual basis behind all the facts of existing styles. A knowledge of the past history of architecture could, no doubt, be the subject of examination, and would go some way perhaps towards showing whether the candidate was a mere surveyor, or whether he had any intellectual interest in architecture as an art. But with that exception, an examination for architects could only be an examination in one half of their profession, and that which is, from the highest point of view, the least important half.

As far as the demand for examination and registration is made on behalf of the public, this difficulty matters nothing, as the public do not care whether architects have artistic genius or not, or even whether they have a knowledge of the history of architecture or can design correctly in the existing styles. All the public want is that architects should be examined in sanitation. They hardly even include construction in their demands, for they do not know what that implies, except in a very vague and general way. But there is a craze about sanitation, and the public are crying out for the examination of architects in drainage; that is the whole meaning of the demand, as far as it is a real demand, which it is very difficult to discover, amid the falsities and misrepresentations which have been circulated. They are apparently backed a good deal by the medical profession, to some of whom we owe a great debt for the impulse they have given to sanitary progress; but who, taken *en masse*, have absurdly-exaggerated ideas about the want of knowledge of sanitary matters among architects, some of whom are certainly a great deal more fitted to instruct the medical profession in practical sanitation than the latter are to instruct them. Doctors have the best chemical knowledge of sanitation; architects the best mechanical knowledge. Both elements are necessary to the satisfactory sanitation of dwellings. The absurd thing is that the people who cry out that this is an age of sanitary progress all seem to assume that the architects alone are remaining unaffected by this progress, and are even adverse to it. What interest could they possibly have in maintaining such an attitude? What some of them really think is that a good deal of what is called sanitary science is illusory, and will have to be reconsidered. Mr. Butterfield, in the *Times* the other day, ought to have opened people's eyes a little as to the real attitude of some of the leading architects in regard to sanitation. Mr. Butterfield is essentially what is popularly called an "art-architect" (an absurd phrase, for a man who is not an art-architect is not an architect at all in the true sense); he is a man who would not be quoted as a sanitary expert; but it should have been made apparent from his letter that "art-architects," though not making a great fuss about sanitation, may have a very clear, and more, a very contemptuous idea, as to some of the operations which are going on under their eyes in the name of sanitation.

What the public want, then, as far as they care about it at all, is a sanitary registration for architects, an examination which would register them as so many sanitary inspectors. What we, and what the best of the profession would require, if we wanted an examination and registration, would be such an examination as would ensure that all who passed it had an adequate knowledge of building construction, of sanitation, and of the history of architecture; such an examination as would show that the man who passed it was a scientific architect, and a man of good education and culture in matters connected with the art. Whether he was an artist or not the examination, as we have said, could not show.

There appear to be a certain number of architects, chiefly in the provinces, who are in favour of such an examination and of subsequent registration, on the ground that it will raise the status of the profession and keep out quacks. The opposite view is that which has been put by Mr. Jackson, in his recent letter to the *Times*, and, more fully, in his paper read before the Architectural Association in December last. He holds, in the first place, that no high level could be fixed in such an examination, as it must, for practical working, be pitched so low as to suit the capacities required in the ordinary Local Surveyor.

> "Now, we all know the very useful but humble official who, for 80*l.* or 100*l.* a year, performs the duties of District Surveyor in rural districts. Henceforth his office would be held only on condition of registration, but as the ratepayers probably would see no reason why they should raise the salary of the office on that account, it would be sought only by the same class of persons as heretofore. The examination test must, therefore, be pitched low enough to allow such persons as these to get over it, and this would fix the legal standard of an architect's knowledge according to Act of Parliament, —a noble result, certainly, of the talk about raising the *status* of the profession in which the promoters of the Bill indulge."

This, we must suggest, is not quite logical. It is a fact that some very incompetent persons get Surveyorship appointments in rural districts, and that the salaries offered are not such as to attract the better class of men. But the operation of an examination, which would shut out from such positions the inferior men who may now hold some of them, would very likely be to compel the bodies who appoint and employ them to offer higher salaries. So far, Mr. Jackson's position is a good deal open to question; though it is true so far as this, that no examination such as would satisfy the standard for membership of the Institute could possibly be made compulsory on persons intending to apply for Surveyorships under local authorities: the standard for the latter might be higher than at present, but it could not be fixed so high as is desirable for the architect properly so called; it would be unfair to a portion of the public that it should be. So far we agree to Mr. Jackson's position, but he has rather overstated his case. Putting aside this point, and supposing that we put the examination at the minimum of what it is indispensable that practising architects should know, shall we by doing so raise the status of the profession (looking at it from the architect's point of view)? Mr. Jackson says no. The mere fact that quacks can call themselves "architects" he considers to be of no more consequence to architects of high standing than the fact of masons dubbing themselves "sculptors" is a grievance to sculptors of high standing,* unless the daubers and masons were made painters and sculptors by Act of Parliament; then the real artists would have a right to complain; and so with the architects, who, as matters now stand, "can afford to smile at the mere use by plumbers and glaziers of a title which pleases them and hurts nobody." This, of course, is ignoring the difference between architecture and the arts just named: the fact that it has a practical basis, while painting and sculpture have not. But Mr. Jackson goes further. He says anything in the shape of a Registration Act must do very great harm to architecture:—

> "Our art consists of two parts, distinct and yet inseparable, the practical and the artistic. It is only the constructive part which admits of the test of examinations; the other or artistic part can be submitted to no such test; it is as idle to think of doing so as to treat painting and sculpture in the same way, and yet without this higher qualification no man can be an architect, and to stamp or 'hall-mark' as such, any one who shows a certain knowledge of construction would be a scandal and a disgrace to a civilised nation."

As far as we have been able to ascertain this view of the matter is a more common one, and more accepted among the eminent artistic architects of the present day, than may be supposed. It is not a mere prejudice of Mr. Jackson's or Mr. Butterfield's. It was held also by Street; it is held by other eminent architects now living. And as far as it applies to any kind of examination which could be applied by Act of Parliament to the profession at large, as a condition of practising, we are inclined to think it is correct. The adoption of such a course would tend to reduce architecture from an art to a mere business, and to place men of no genius or culture on a level, in the public eye, with men who are really artists.

We do not believe, however, that the same difficulty or objection would apply to a general recognition of the Institute Examination, that is to say, of membership of the Institute, as a test of professional proficiency. That, as Mr. Jackson (though not a member of the Institute) admits, is an examination of a much higher and more efficient class than any which Government could undertake to carry out directly. Membership and examination by the Institute might be adopted by Government as a condition of registration; but we somewhat question whether even this would be beneficial and effective for the ends proposed. No legislation can well prevent a man acting as architect for his own property, and that is the position of the jerry builder, so that no registration will touch him; but an Act requiring all persons applying for the post of a Local Surveyorship to have passed an examination by the Institute of Architects may be suggested as a means whereby the control of the jerry builder and his works may be rendered more effectual. Beyond that, we are disposed to think that Government interference is likely to do more harm than good to the best interests of architecture. As Mr. Jackson truly says,—"At no time have English architecture and English architects commanded more respectful attention from other nations than now, and the secret of this may be looked for in the freedom from State control and official interference which we enjoy." What would follow from the imposing of a Government standard would probably be a further development of the kind of official architecture which now emanates from the Office of Works. But the general recognition by the profession among themselves of the advisability of supporting the Institute, and rendering it rather a point of honour to become a member of it by passing its very thorough practical examination, would give assurance of a certain standard, and a very good standard, of practical acquirement, without the official "hall-marking" to which Mr. Jackson objects, and objects with reason; and if architects were as united and as true to the interests of their profession at large as the engineers are, this end could be easily attained, and membership of the Institute would take the place, now that examination is a condition of entrance,

* Perhaps the sculptors will say it *is* a grievance: we have not their opinion on the matter at present.

which it ought to take, both with the profession and the public, as a guarantee of such amount of proficiency as can be secured by examination. Whether the real benefit to the public would be what some persons suppose, may very well be questioned. It is noteworthy that the engineers do not attach any value to examination in regard to their own profession,—a very significant fact, seeing that engineering proficiency, dealing only with science and not with art, is capable of being tested by examination in a way in which architectural genius cannot be. But though the engineers attach great importance to membership of the central Institution, they attach no importance to examination. Probably they know that the personal capacity for dealing with engineering problems cannot, after all, be really tested by examinations, like a great many other things which examinations are erroneously supposed to test. The idea of putting everything to the test of examination is a kind of mania of the day; like other manias, it has a substratum of reason, but far more has been expected from it than has been attained. But if the architects think that it is a point of wisdom to recognise and bow to that mania, they can best achieve their end by availing themselves of the Institute Examination, the passing of which can certainly do themselves nothing but good; it will probably, when its conditions are understood, satisfy at least the wishes of the public; and a more general and cordial recognition of the Institute as the representative and examining body, by the profession at large, a greater unity of aim and action, will certainly tend to strengthen the position of the profession, as we see that it does in the case of the engineers, who are a much more united and consolidated body than the architects, and are strong accordingly; a point in which the architectural profession may well take a lesson from them.

THE CENTRAL WARDS OF TOWNS.

WHEN people choose to govern their own affairs, and elect, for convenience, representatives to sit in Council in their stead, they become responsible for many things, one of which is that such arrangements shall be made as will enable the Council to conduct the affairs without discord. This is the very foundation of successful self-government. It is impossible for representatives of the electors to conduct affairs with calmness and deliberation if their attention is distracted by jealousy of each other's proceedings, whereby feeling is imported and judgment lost.

The number of things a Town Council has to attend to is surprising. The making and maintenance of roads, cleansing roads, lighting streets, providing a supply of water, enforcing the law in respect of adulteration of food, removal of nuisances, providing sewerage and disposing of the sewage, prevention of overcrowding, safety of public buildings, hospitals for infectious diseases, mortuaries, disinfection of unclean houses, providing public baths and recreation grounds, cemeteries, providing markets and controlling fairs, regulating the weights and measures in common use, providing and maintaining free public libraries and museums, widening and improving streets, purchase of property for street improvements, rectification in a sanitary sense of small houses, industrial schools, making a rate for the School Board, making by-laws, providing and maintaining a fire brigade and a police force, execution of all sanitary work required for the health of the town, and generally conducting the town's business, which can only be properly done by dividing it amongst committees for the consideration of the separate requirements, some of which arise only now and then, while others are of daily occurrence.

The Town Council need not sit oftener than four times a year, once in each year, but practically they are obliged to meet more frequently, and committees more frequently still, being called together as occasion requires, which is sometimes on several days in the same week. Some committee-men do not seem to care much about this, but to others it is troublesome, and it often happens that a full committee cannot be got together. This is so well known that the number of members of each committee, nominated yearly after the election of the new members, is much greater than is required to form a quorum and proceed with business. This induces a still greater laxity in the attendance of unwilling members, for they hope that, although they may not attend a meeting to which they are called, others will do so. Moreover, the business upon which they are called may appear to some of the representatives not to concern the interests of their constituents; and, on the whole, it is generally found necessary to nominate a considerable number of members for each committee; but it is bad in this respect, that those members who do not attend regularly do not acquire a sufficient knowledge of the whole of any question, and cannot, therefore, give their opinion with confidence. However, by dint of hard work and meeting sufficiently often, the various interests of the town are attended to at one time or another, and are put in form by the committees for being brought before the Town Council for approval; and the ratepayers who grumble at supposed neglect of their interests by their representatives are yet much beholden to them for the attention they give under difficult circumstances.

But the source from which all action springs in municipal affairs is the interest of each elector. There is no strengthening of individual interests by the action of a body of representatives, such as there is by the combined action of a number of individuals, whereby each one strengthens another and the whole, by his action in the same direction at the same time. The Council is a convenient instrument, only, of action; it does not increase the power of the electors. The only way to sustain the interests of individual voters is that each one remember that he is an integral part of the town, and that he has an interest in the town as a whole, besides that of his own personal affairs; and the cardinal point to be always kept in view by each voter is that he makes one of the town, and is interested in the whole of it. Any large town is divided into wards, for convenience. There are many formalities to be observed in the election of councillors, to ensure compliance with the law. The whole number of electors could not record their votes in one day at one polling place in any large town, and to ensure proper supervision and certainty of election, a large town is divided into wards, which is also for the accommodation of the electors, both in limiting the number congregating at one place and saving long journeys.

The normal town was formerly much smaller, but there were all, or nearly all, the same interests then as now, although on a smaller scale. The town has been extended from that nucleus to its present dimensions. The town-hall and its public square may be taken as a centre, although geographically it is in some cases not very near the centre of the town area, and still less near the centre of the borough, but it may be called the centre of interest. There are in its immediate neighbourhood the banks, the post-office, the exchange, the assembly-rooms, the free public library, the offices of the solicitors, surveyors and estate agents, architects, and civil engineers; warehouses, the larger retail shops, all such institutions as are not parochial, and, in general, the most valuable property in the town; while manufacturing works are in other parts of the town chiefly, and the residences of well-to-do people are in different other parts of the town.

Workmen live as near their work as possible, but sometimes many together in the same neighbourhood, in which are also shopkeepers, medical practitioners, and others.

Formerly the well-to-do people had their residences near this centre, but with the growth of the town these houses have been turned into offices. Smaller houses near the centre have been pulled down, and warehouses and other large buildings erected on their sites, such as are required for wholesale trade; for these must be in the neighbourhood of the banks and the Exchange, and the offices of professional men; so that gradually the central part of the town has become changed in character, and the area which used to be occupied by property and people of different interests now belongs chiefly to one.

In dividing a town into wards, as was directed by the Municipal Corporations Act of 1835, it has hitherto been customary to include this central interest in a separate ward, whereby discord in town councils has been created.

Every ward and township in a borough should have an interest in the whole of it. In every town divided into wards (omitting London) there is a centre towards which all persons from the outer wards and townships make their way as straightly as circumstances permit. In old times people made their way towards a town from different directions converging by roughly-direct lines of road, which did not all reach the centre, but stopped where the business of the people led them to; and in most cases the present main roads into a town are the old ones improved in directness. Where a river runs through a town detours have to be made to pass over the bridges, but when this has been done people follow the nearest routes into the main roads again. They have also to traverse the streets of the town towards the centre in angular directions, but, more or less, the direction of these main roads is towards the centre of the town. The diagram (fig. 1)

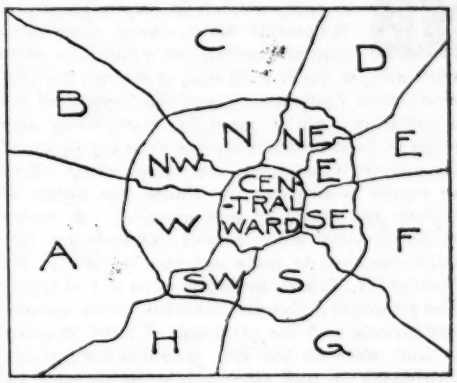


Fig. 1.

may represent the different wards. The divisions follow the ancient boundaries of townships as far as they serve the purpose, and elsewhere main roads or other well-defined boundaries are adopted. The borough in some cases extends beyond the ward boundaries, and includes several townships, as A, B, C, D, E, F, G, and H, which are represented in the Council as out-townships, the representatives of which are of equal standing with those of the town wards.

It is the favoured central ward in which

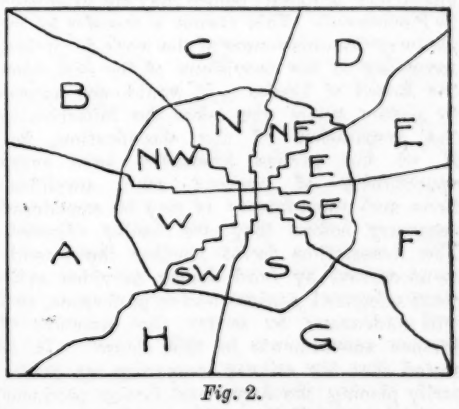


Fig. 2.

most improvements are made by Town Councils. A representative of another ward or an out-township may propose and even strongly urge a due proportion of expenditure in the interests of his constituents, whether for sanitary requirements or for works of convenience or ornament, but often without effect, because he receives no assistance from the powerful representatives of the central ward. When an improvement is proposed in the central ward the representatives of the outer ones oppose it because they must contribute to its expenses without enjoying a

proper share of its benefits, and it is opposed on that ground, and not on its merits.

But with divisions of wards radiating,—however crookedly,—from a centre, say a central public square, as in fig. 2, each ward would partake of and be interested in improvements wherever made; for as each ward would contain a portion of the favoured area, any improvement must be made in one ward or another, and each representative would reasonably expect, in the interests of his constituents, that the proper improvement would be made in his ward in due course of time, and each would have the assistance of all others, and no representatives of an exclusive central ward would oppose desirable improvements in any part of the town.

The representatives of the outer wards now try to rectify this, and weaken the influence of the central ward, by proposing a reduction in the number of its councillors and increasing their own by the number taken away from it; but this is ineffectual. The central ward should cease to exist separately, and should be divided amongst the others, whereby sympathy would take the place of jealousy in Town Councils and discord would, to a great extent, cease, and the representatives of the ratepayers would have more leisure and do more useful work when they meet.

NOTES.

THE Railway and Canal Traders' Association,—which is now a large and influential body,—held their fifth annual meeting last week. The principal subject dealt with was, of course, the Bill now before Parliament; and the Council of the Association, while strongly disclaiming any attempt to interfere with the existing rights of the railway companies, are using every effort to secure a measure in which the rights of traders are carefully safe-guarded. A series of resolutions were passed, embodying the recommendations made last year by Mr. J. W. Barclay, M.P., with regard to rates and charges. The principal difference between these recommendations and the proposals of Lord Stanley is that whereas the Bill provides for revised classifications and schedules to be prepared in the first instance by the railway companies, Mr. Barclay considers that this work should be undertaken by the Railway Commissioners. Other suggestions are that maximum rates should be noted for each class per ton, per truck-load, and per train-load,—to be inclusive of all charges except loading and similar services. Simplicity and uniformity to be aimed at, due regard being had both to the provisions of the companies' special Acts, and the interests of the community. Both the public and the railway companies to be permitted to make representations upon the Commissioners' proposals before they are submitted to Parliament. This means a transfer to the Railway Commissioners of the work devolving, according to the provisions of the Bill, upon the Board of Trade. It would not appear to matter much who takes the initiative in the preparation of the classification, &c., if all the parties interested have every opportunity of making such amplifications and amendments as may be considered necessary before they are finally adjusted. The Association doubt whether the amendment carried by Lord Jersey provides sufficient safeguard against undue preference, and will endeavour to secure the insertion of further amendments in this clause. It is stated that the railway companies are voluntarily placing the home and foreign producer upon the same footing with regard to some of the rates from Liverpool, and it will be remembered that the inequality of the rates from that port has been a most prominent subject of complaint whenever the question of undue preference has been under consideration.

MR. MATTHEW ARNOLD, in an article on civilisation in the United States, in the current number of the *Nineteenth Century*, which is probably the last of his compositions, referring to the deficiency of beauty in America, remarked:—"The American cities have hardly anything to please a trained or a natural sense of beauty. They have buildings which cost a great deal of money, and produce a certain effect,—buildings, shall I say, such as our Midland Station at St. Pancras [which Mr. Arnold evidently rates cheaply, and with justice too], but nothing such as Somerset House or Whitehall." It would have been better perhaps to put Whitehall first, but it would appear as if Mr. Arnold considered the two buildings of the same date, and both equally interesting. "One architect of genius they had,—Richardson. I had the pleasure to know him; he is dead, alas! Much of his work was injured by the conditions under which he was obliged to execute it; I can recall but one building, and that of no great importance, where he seems to have had his own way, to be fully himself; but that is indeed excellent. In general, where the Americans succeed best in their architecture is in the fashion of their villa-cottages in wood. They are often original, and at the same time very pleasing, but they are pretty and coquettish, not beautiful." Our readers who have had the advantage of studying this branch of American art by means of the illustrations which we have given from time to time will recognise the force of this criticism.

THE above "Note," the first, as far as we remember, in which we have had occasion to refer to any criticism of Mr. Arnold's on architecture, was sent to the printer only an hour or two before the news of Mr. Arnold's death reached us. The subjects on which his rare critical powers were employed were mostly such as are beyond the limits imposed on us here; but it cannot be out of place to say here a word of homage to his memory as the most thoughtful critic and one of the most gifted poets of his day, and a man who in every sense represented the highest intellectual and moral standard of life.

A MEETING of the General Committee appointed to carry out the Liverpool Cathedral Scheme, which was held at the Liverpool Town-hall on Friday last week, revealed a melancholy state of apathy on the subject, in comparison with the ambitious ideas with which the competition for the design was inaugurated. The instructions to competitors, it may be remembered, contemplated a possible expenditure of 300,000*l.* Any idea of raising funds to build such a cathedral as was contemplated on the site behind St. George's Hall having been abandoned, a resolution was passed that if they could see their way to obtain promises for 30,000*l.* for the St. Peter's site, the executive committee would recommend the general committee to go on with a building on that site. But even this sum, which after all would only have been sufficient for a good-sized parish church building, could not be obtained by the most active canvassing of two very energetic and popular members of the Committee, Sir W. B. Forwood and Mr. Clarke Aspinall: all the promises they could collect amounting only to 25,000*l.* Under these circumstances, it was resolved to postpone the matter *sine die*, keeping open the Cathedral subscription account at the bank in the meantime. This is certainly "a most lame and impotent conclusion" to an affair started with most ambitious aspirations. Sir W. Forwood accounted for it by "hard times," mentioning that the income-tax assessment in Liverpool had shown during the past few years a decrease of 3,000,000*l.*; and also that about 90,000*l.* had been taken from Liverpool in the guarantee funds for the two recent exhibitions. We are disposed to think, however, that there is more to the point in the statement of another gentleman, Mr. Cliff, who spoke at the meeting, and who suggested that want of uniformity in the church itself was the cause of the failure; the High Church party would not have a Low Church Cathedral, and *vice versâ*. It is quite clear, at all events, that Liverpool at present does not care much about a cathedral, otherwise more than 25,000*l.*, we must think, could have been raised, in spite of unprosperous times.

THE Society of Antiquaries have issued a memorandum addressed to the archbishops, bishops, and chancellors of dioceses, deans, archdeacons, and rural deans, on the subject of church restoration, calling attention to the destruction of ancient monuments and interesting architectural remains by the process of modern ~~church~~ restoration. It is pointed out that it is frequently found to be the case on visiting a restored church that monuments and painted glass recorded in county histories have disappeared, that the ancient font has been removed, the old Communion-table destroyed, the Jacobean pulpit broken up or mounted upon a stone pedestal, and the Communion plate sold. The architectural features of the churches have been modified in numerous instances, and the character of the church destroyed. The Society expresses a hope that all possible moral influence will be brought to bear upon the preservation of all objects and features of historical or archæological interest in churches, and suggests the propriety of incumbents and others being informed that the sale of church plate without a faculty is illegal. This is all very well, but we doubt whether the remonstrance of the Society will have any effect.

THE Steam Engines and Boilers' Bill, the second reading of which was rejected by the House of Commons on Tuesday, was one of those irritating and Utopian measures which it is surprising practical men can introduce into the legislature. It was intended by it to oblige any one who had charge of a boiler, however small, to have a certificate from the Board of Trade. The management of boilers is really a simple matter; that which is chiefly required is care and prudence. But a dozen certificates from the Board of Trade will not make a man careful, and indeed might tempt employers to use a man rather for his certificate than his personal character for care. The measure was, in fact, the *reductio ad absurdam* of the Examination, and was very rightly rejected. It was a mistake, however, to occupy the House of Commons with such a Bill.

THE Trustees for the Ancients and Companions of Barnard's Inn, Holborn, have decided to sell that freehold estate. Forming a parish by itself, and covering about 28,000 ft. superficial, the property yields a total income of nearly 2,500*l.* a year, derived from chambers and offices, some shops in Fetter-lane, and Nos. 20-23, Holborn. Early possession may be obtained, since the longest outstanding lease will expire on Lady-day 1890. This Inn of Chancery was once an appanage of Gray's Inn; the hall,—like to that of the neighbouring Staple Inn,—is a relic from the Great Fire; and the Fetter-lane front forms a noteworthy specimen of old domestic architecture. Some further particulars in regard to the history of the site will be found in another column.

ADVERTING to our "Note" of last week we are reminded of the following passage in the "Tour in Scotland, by William Cobbett, M.P. for Oldham. London: Published at 11, Bolt-court, Fleet-street . . . . 1833":—

"And now, I, for the present, take my leave of Scotland with expressing a hope that going from, and returning to, that very identical room in Bolt-court from which Dr. Johnson went, and to which he returned to spread over England the belief that there was not a tree in Scotland, and that all was sterility and worthlessness," &c.

Cobbett, it will be observed, publishes his "Tour" at No. 11. In reply to an article, "Haunted London," which appeared in *All the Year Round* on May 21, 1859, Bensley sent an account of his residence in and associations with Bolt-court, of the fires, &c., to Charles Dickens, who reproduced it in that journal of July 9, 1859. Perhaps the renumbering of the houses will explain Cobbett's apparent mistake as to the situation of what he believed to be the "very identical room" of Johnson. But the latter made his tour in 1773, and his "Journey to the Western Islands of Scotland" was first printed in 1775, the date of an original copy *penes nos.* He was then

living in Johnson-court; when in Scotland he humoured Boswell by styling himself Johnson of that ilk. Cobbett wrote, printed, and published his "Political Register" in Bolt-court, his office being, reputedly, at the present No. 10. The History of the Regency and Reign of King George IV. was printed by Mills, Jowett, & Mills, of Bolt-court, and was "published by William Cobbett, 183, Fleet-street, 1830."

THE collection of water-colours illustrating the "Duchy of Cornwall," now on view at the Fine Art Society's Gallery in Bond-street, is not, like so many of the exhibitions there, the work of one artist, the authors in this case being, "like Cerberus, three gentlemen at once," Messrs. Alfred East, T. C. Gotch, and Ayerst Ingram. The intention of the three artists seems to have been to go out of the beaten track of Cornish scenery, and give views of coast scenes and villages not much known, and which represent the ordinary characteristics of Cornish scenery and life rather than selected points of specially grand or picturesque character. There was plenty of room for such a treatment of Cornwall, and the collection is a very interesting one. The best portions of it are the contributions of Mr. East, whose drawings exhibit a fine broad style and a great feeling for atmospheric effect expressed in the true manner of water-colour. The large drawing of "Evening Glow, Hayle Copperhouse" (56), is particularly fine; and among others by this artist which may be specially mentioned are "Showery Weather, Hayle Foundry" (2); "A Sunny Day, Brodriggy" (9); "Noon, St. Phillack" (45); and "The Pool, Hayle Copperhouse" (79). Mr. Ingram's "Off the Lizard, a Summer Breeze" (33) is one of the best drawings in the collection, remarkable for a fine windy sky; "Rainy Weather" and "Trawlers at Anchor" (22, 24) are two good examples of Mr. Ingram's power of depicting shipping and sea effects. Mr. Gotch mostly takes the personal element of the country, and "Silas" and "Ethel" (54, 61), and "An Old Salt" (19) are, we presume, what are called "types" of the population, of whom "Silas" shows the most character. The exhibition is well worth a visit. The catalogue would have been quite as useful for its purpose without the pretentious and conceited preface signed "R.A.M.S.," the main object of which seems to be to persuade people that nobody knows how to paint Cornish scenery except the three artists concerned. We have before protested against this recent fashion of thrusting upon the purchasers, under the guise of a "harmless necessary cat"-alogue (to adapt Shylock's words), an essay to tell them what to think about the exhibition. To those who have no perceptions of their own about art such an address is useless; to those who have it is an impertinence.

A COLLECTION of sketches by Mr. W. L. Wyllie is on view at Messrs. Dunthorne's, under the title of "Netherland Waterways," being sketches of Dutch harbours and canals, made during "the cruise of the *Ladybird*," a craft so named because she bore a resemblance in general shape and proportions to that insect. Of Mr. Wyllie's ability in illustrating such scenes it is unnecessary to speak; no artist of the day understands shipping better, and the collection forms an interesting illustration of the features and character of Dutch port scenery. We found the sketches, or some of them, rather hard-looking and deficient in aërial effect, however, in comparison with much of this artist's work; but they give the idea of conveying very truthfully the character of the localities. Among the exceptions to the rather hard manner to which we referred, one of the best is the very fresh and spirited bit of sea-painting, "The Rolling Zuyder Zee" (62). Mr. Wyllie observes that the "Zee" does not possess the depth attributed to it in the well-known ditty, as, in fact, "you can touch the bottom with a boat-hook anywhere." The drawing, which represents the sea under the influence of a stiff breeze, conveys very truthfully the effect of water violently roughened on the surface, but with no weight or depth beneath to give size and swing to the waves. The catalogue is preceded by a pretty long pamphlet, which in this case is *not* an essay on the superior qualities of the exhibitor's works, but a lively and amusing narrative of the cruise, with a number of sketches of local characters thrown in as further illustrations.

A SMALL collection of sculpture on view at Messrs. Bellman & Ivey's in Piccadilly contains some very good works, some of which have been seen there or elsewhere before. Among those which are new to us is a fine marble head by Mr. Maclean, called "After the Ball," a contemplative rather melancholy head of a young woman, noteworthy also for its broad and bold execution and absence of that over-finish and polish of surface which is often indulged to the detriment of the highest sculpturesque character. Mr. Maclean's seated statuette, "Ione," is there in marble; the work was seen in a Grosvenor Gallery exhibition some time since, but, if we remember right, in plaster: it is a beautiful and poetic conception. The two terra-cotta heads of monks, life size, by Mr. Onslow Ford, under the titles "Fasting" and "Feasting," have much originality and character.

THE voting on the Metropolitan Board of Works Theatres Bill, which was rejected on Tuesday night by a majority of 144 to 18, is not, of course, to be necessarily accepted as a precise indication of the attitude of the House towards the measure in itself. But it was, no doubt, felt that it was futile to pass legislation to give new powers to a Board whose course is probably nearly run, and this is no more than the common sense of the matter. We doubt if the Bill would have passed in any case; but there can be no doubt that the feeling we have referred to was the real cause of the extraordinary majority against it.

THE Architects' Registration Bill was brought up for second reading on Tuesday night, and disposed of after a short debate, in which it met with a unanimity of opposition such as we hardly expected, considering the prejudices and ignorance about architectural matters among many members of the House of Commons. The Bill was opposed by Mr. Giles on behalf of the engineers, by Mr. Isaacs on behalf of the architects, and by Mr. Beadel on behalf of the surveyors; but the strongest and most important opposition came from independent members, — from the Attorney-General, as the representative of law and common-sense, and from Sir Lyon Playfair, whose opposition, considering all that has been said as to the desire of the medical profession for the passing of the Bill, is pretty significant. Mr. Murphy, the sole supporter of the Bill, was probably a little more candid than he was aware of when he said that the Bill was an opposition to the "close borough" system of the existing professional bodies. We all know that, and Mr. Murphy had evidently been tutored, but we suspect he said more of his lesson in public than was expected of him. Colonel Duncan appears to have felt that he had no course but to ask leave to withdraw the Bill. He observed, indeed, that "they had gained a great deal by that public debate," and possibly Colonel Duncan has gained some knowledge which he had not before, including, perhaps, a perception of the fact that he has been made a catspaw of. So there, we presume, is the end of a storm in a puddle.

New Public Baths for St. George's, Hanover-square. — The Commissioners for these Public Baths are about to erect new baths and washhouses on the site of the old baths pulled down some time since, in Buckingham Palace-road, Pimlico. Designs for the new baths have been recently sent in by the following gentlemen, who were selected in limited competition, viz.: — Messrs. Thomas Allom, Horace T. Bonner, F. Bolton, George Elkington, Simpson & Allen, Francis J. Smith, Verity & Hunt, J. Waldram, and Jas. Wear. The estimated outlay will be about 30,000*l*.

THE CHURCH BELLS OF KENT.*

THE study of the church bells of England has already produced several goodly volumes, and we gladly welcome another contribution to their increasing number. Mr. Stahlschmidt, who is already well known by his admirable volumes on "Surrey Bells and London Bell-Founders," and as editor of the "Church Bells of Hertfordshire," has produced another bell book, which we are now glad to have the opportunity of introducing to our readers.

Publications of the nature of the volume before us deserve especial encouragement, for, while they must of necessity commend themselves to only a certain class of readers, yet, on the other hand, the labour of their preparation must be very great.

Previous bell students have confined their researches to a few examples only. Their records, mostly unpublished MSS., are of value, since they very frequently afford information of bells which are no longer in existence. The number of old bells which are being continually recast is, indeed, from the evidence now before us, to go no further, enormous, and hence a record of their state and condition is of no little value to campanologists. The cause of this havoc, "good for trade" as it may be, is occasioned to some extent by the pernicious system of "clocking," which has ruined many a good bell, and will ruin many more before it is abandoned. Our author is, of course, unsparing of his condemnation of this practice, and he might have been more so.

The book treats of the whole of the bells of the county. This heavy task, which is what modern writers on this subject have to face, appears to have been accomplished in a very thorough manner, and we congratulate both author and publisher upon the production of the handsome volume before us. The extent of the work which has been accomplished will be well understood when we say that the 597 churches of Kent contain approximately 1,952 bells. Except in the case of modern churches, each of these bells is passed under review in an inventory. Their inscriptions are given; their makers' names, wherever the author could trace them, have been recorded; specimens of the lettering and other art features are given, and many quaint and curious points are recorded. When the labour of examination of a belfry is understood, and when this is repeated in the case of every church in the county, the nature of the task which has been accomplished will be apparent.

Bell students consider all bells cast in or before 1600 as "ancients." Under this class there come only about one-seventh of those in Kent; but in many other counties we are inclined to think that the proportion will be greater. "Ancients," again, are divided into pre-Reformation and post-Reformation bells, and the former into Lombardic and "black letter" bells. The earliest examples which remain in our churches belong to the former category. They are long-waisted, which form nearly always denotes a bell of very old date. They have in some cases no inscriptions at all, but most frequently the inscription appears, and this being in Lombardic capitals, the title is conveniently and appropriately obtained. The inscriptions are widely spaced out over the entire length of the inscription-band, as a very general rule; but the example at Goring, Oxon, date not later than 1290, has an elaborate series of letterings.

The bells in Kent of a date prior to 1400 are only thirty in number, and two bells at Iwade, without inscriptions, are the oldest in the county, since they are assigned to the first half of the thirteenth century. These are followed by other uninscribed bells at Coldred, Lullingstone, and Sutton-by-Dover.

Before we return to the consideration of the ancient bells, which forms the most interesting portion of the book, it may be well to complete the summary of the later bells.

The Elizabethan period appears to have been an active one for the bell founder, since of the date from 1570 to 1600 no less than thirty-eight bells are found in this county. But this activity is increased in the following century, 1601-1700, to which 475 bells are assigned. Those from 1700 to 1800 are no less than 578, while the present century has produced already 711. The

* The Church Bells of Kent: their Inscriptions, Founders, Uses, and Traditions. By J. C. L. Stahlschmidt. London: Elliot Stock. 1887. Crown 4to, p. 455, with plates and illustrations.

sum already stated is made up by fifty-three doubtful bells. It must be remembered that the bells thus referred to are in many cases ancient bells recast, and heavy bells, previously fewer in number, formed into lighter peals for change-ringing, so prevalent in the eighteenth century.

The use of black letter came in about 1390, and the two styles, Lombardic capitals and black letter, prevailed side by side for about twenty years. If Lombardic letters are found, with stops between words, our author assigns the bell to an earlier date than 1400. The later inscriptions have capitals, frequently produced from the older stamps. Stops, dots, &c., are early; crowns, fleurs-de-lys, &c., are later. Foundry stamps are rare on Lombardic bells, and were not in general use until the beginning of the fifteenth century. These particulars are of value to determine the date of a bell, but only by an expert, for the foundry stamps, initial crosses, and alphabet stamps passed from hand to hand in a manner that will be found to be very confusing to a novice, who will thus find early stamps on later bells, and so on.

Inscriptions entirely in capitals came in again about the second quarter of the sixteenth century, but there were no stops. Dates appear pretty generally after 1570.

To turn from generalities to considerations of some of the actual bells themselves, we find that early bells exist at Stodmarsh, Snargate, and Burham, the former being not later than 1300 and possibly much earlier. It bears the inscription "Ave Maria gracie plena," very usual on bells, but this is its earliest occurrence in the county.

The first record of a founder is at Burham, and it bears the name "Richard de vvymbis me fecit." This London founder dates from 1290 to 1315.

A sketch is given of the stamp attributed to William de Belzetere, 1325, and the small cross stop which he used is again found on bells 150 years later, while his lettering is to be found on many bells in East Anglia, probably from a foundry at Norwich, to which they must have passed.

The name of Welelmus Revel, a London founder of the fourteenth century, appears on a bell at Longfield, and the same lettering was used afterwards by Peter de Weston. It occurs at Sutton-at-Hone, and at Bethersden. The name of another London founder, Rob. Rider, 1351–86, occurs at Hartley. Wm. de Belzetere was a Canterbury founder, and there is record of another local maker, Stephen Norton, of Kent, who used a fine alphabet of crowned capitals. He flourished from 1363 to 1381, and was buried at Maidstone.

Bells by local men do not appear after this date. The numerous East-end London foundries appear to have executed all the existing examples. William Burford, 1371, about to 1392, the first London founder who called himself "Belzeter," appears to have made four bells in churches enumerated. William Wodeward, 1395-1420, most probably is the author of the bell at Cuxton, which has a cross, found also by our author at Little Hormead, Herts.

All the above are Lombardic bells. The black letter examples which follow are, in like manner, the work of London foundries, some of which deserve notice. Local work does not appear again until the sixteenth century. William Dawe, 1385-1418, has his name inscribed around a pretty stamp on bells at Down, Upper Hardres, and Otham, but, in the first of these instances, it occurs in conjunction with a stamp ascribed to William Wodeward, while at Hardres there is also a curious shield with three laver pots, which our author conjectures to have been a sign of the Bellmakers' Guild, and used in common by its members. Curiously enough, Dawe's stamp is found in use, probably in one of the Reading foundries, on bells of the sixteenth century. A shield with the initials R. C., ascribed to Robert Crouch, exists on three bells, but with the small alphabet of an earlier maker. "Royal Arms" bells exist at four churches, which are named, and they have the same initial cross, capitals, and small black-letter alphabet used by an earlier founder. Robert Burford, 1392-1418, who succeeded his father, used his stamps, and made five bells in the county. The stamps then passed to another founder, probably Richard Hille, but the latter used a separate foundry stamp. Johane Hille, the widow, carried on the business, and there is record of a contract, 1441, between her and the parishioners of Faversham, relative to the casting of five bells, with a warranty for a year and a day. None of her bells exist in Kent. She appears afterwards to have married John Sturdy, a founder, and again become a widow, for there is another contract with her at Faversham, 38 Henry VI.

The names of a goodly number of London founders appear on Kentish bells of the latter part of the fifteenth century. Thus Wm. Powdrell appears to have made a bell at Sowting, and Hy. Jordan, 1442-1468, who must have been the largest maker of his time, used Powdrell's stamps. A large number of his bells still exist in Kent, while there is scarcely a county in Mid or South England which does not contain specimens of his workmanship. He used several old marks, some of which our author skilfully traces from much earlier use, through several hands, to Jordan.

In like manner, Thomas Bullesdon, bell-founder, also of London, had several of Jordan's stamps. There is only a single bell at Cudham of his work remaining in Kent. The year 1500 brings us to a founder, Richard Kerner, who is supposed to have been established at Canterbury, and several bells, within easy distance from that city, are ascribed to him; one of these, at St. Mary Bredin, has a curious date in quasi-Arabic numerals, which is read as 1505.

The foundry mark of Wm. Culverden, citizen and brazier, of London, the foundry being in Houndsditch, occurs on bells at Boughton, Aluph, and Graveney. His will has been examined by our author, and it shows that his trade implements were sold to Thos. Lawrence, bell-maker. The mark, St. John the Baptist, used by the latter, occurs on a bell at West Cliffe.

Wm. Oldfield, a Canterbury founder, cast several bells, of which eight remain, and they present some curious inscriptions showing transition of religious feeling at the Reformation.

Of the Elizabethan bells, thirty-six can be attributed to London founders, thirteen were of local make, four undeterminable, and the remainder the work of itinerant founders. In addition to those in existence, there is record of others, bringing up the whole number to fifty-six.

The names of the London founders are John Harding, Lawrence Wright (1586), and Robert Mot. The latter, as the founder of the celebrated Whitechapel Foundry, still carried on by Messrs. Mears & Stainbank, deserves special notice. He started his foundry about 1570, on the north side of High-street, Whitechapel, where Tewkesbury Court now is. His earliest bell in Kent, at Bredgar, is dated 1579, his latest being at Fawkham, 1604. Twenty-one of his bells in the county are extant, four more have recently been recast, and there is record of nine more. Mot, too, used lettering which formerly belonged to other founders. Thus we find him using the alphabet of the Braziers, bell-founders of the fourteenth and fifteenth centuries, at Norwich. Mot must have obtained possession of it before 1575, for a bell at Barnes, Surrey, has one of them with this date. The business was sold in 1606 to Joseph Carter, of Reading, and the above stamps, which he used all through his career, passed to his successor. At the same time the identical stamps were being used by the Watts family at the Leicester Foundry, doubtless a duplicate set. This is the only instance known of such double use. Giles Reve, a Kentish founder, whose exact locality is not known, whose works do not appear to exist outside the county, appears to have cast a good many bells between the years 1584 and 1592, the lettering employed being sprawling Roman capitals, with impressions of coins and medals and with figures of men and animals. He spells his name Rewe at Frindsbury, and at Cuxton the inscription runs simply "By me Gylles bell founder 1589." Thomas Hatch, another Kentish founder, was the author of two bells, dated 1599. His stamps passed to his successors, Joseph and William Hatch, who were the makers of a large number of bells, 155 being attributed to the former and 25 to the latter. The foundry was at Ulcombe, and it came to an end in 1664, on the death of William Hatch.

Of the bells of the seventeenth century, nearly 300 are the work of local men, the remainder being the work of either metropolitan founders or of itinerant ones.

Among the other local founders were the Wilners of Borden, where John Wilner appears to have established a foundry about 1618. Seventy-two of his bells exist. He was succeeded by Henry Wilner, of whose work only two examples are named. He used lettering very slightly raised from the surface. At Canterbury bells were cast by John Palmer, who was succeeded by Thomas the elder and Thomas the younger, and there are many examples of their workmanship, dating from 1638 to 1670.

The county possesses many examples from all the London foundries of the eighteenth century, and works from the Hodson's Foundry are cited, together with those of Matthew Bagley, Isaac Hadley, Samuel Newton, John Peele, Samuel Knight, Thos. Janaway, and John Warner.

The continued progress of the Whitechapel Foundry, and the celebrated works of its various owners, are all enumerated, and many examples are given of the curious rhyming inscriptions on the bells cast by Messrs. Pack and Chapman.

We have referred to the works of itinerant founders. Their process appears to have been to set up their foundry at the spot where the bell or bells were to be re-cast, and to perform the work then and there. Many circumstances would tend to render this primitive mode of proceeding a good one. Not only was the heavy cost of transit over indifferent roads avoided, but the prevalence of timber for fuel on the spot must have lessened the cost. The records of this class of work are always of interest, and in the volume before us they are not infrequent, although they occur later than may have been anticipated. Thus we hear that John Waylett, who travelled for S. Knight, of Holborn, and had his furnace at Hythe. He was a hard-working man, and his bells are found abundantly in the home counties. S. Knight, the maker of the well-known sweet-toned bells of St. Saviour's, Southwark, has eighty or ninety examples in Kent. The work is rough, but the tone excellent. There is a curious tradition at Lyminge that the smallest of the bells was cast on the village green, and that silver coins were thrown into the molten metal by members of a local family. It probably refers to the tenor, but it is now a comparatively modern, re-cast, bell.

The bells of Mersham, re-cast in 1612, were probably done on the spot, since a quantity of gutter bell-metal was found not long since in digging a grave.

There was an ancient bell at Luddersdown, now re-cast, of early date, with a peculiar cross and lettering, which occurs in Leicestershire and Lincolnshire. The existence of the bell so far from the foundry is accounted for on the very possible supposition that at the Dissolution it may have been sold as old metal when taken from some suppressed monastery, and afterwards re-sold as a second-hand bell. This suggestion of our author's may be of service in determining the history of many other bells foreign to their positions in other counties.

The inscriptions on the Kentish bells are, as a rule, of a class not at all uncommon. The following may be cited as the most interesting examples:—

Sutton-at-Hone (fourteenth century).—
" Tempora fulgura dum
Pulso cesso Maria."

Bethersden (fourteenth century).—"In Multis annis resonet campana Johannis."

Ryarsh (formerly).—"Sancta Ursula cum Sodalibus Tuis Ora Pro Nobis."

Shipbourne.—"Sancte Gabriel Ora Pro Nobis."

Down.—
" Surge mane servire deo
anno dni mdxi."

Luddersdown (formerly fifteenth century).—"ihc Maria Katerina."

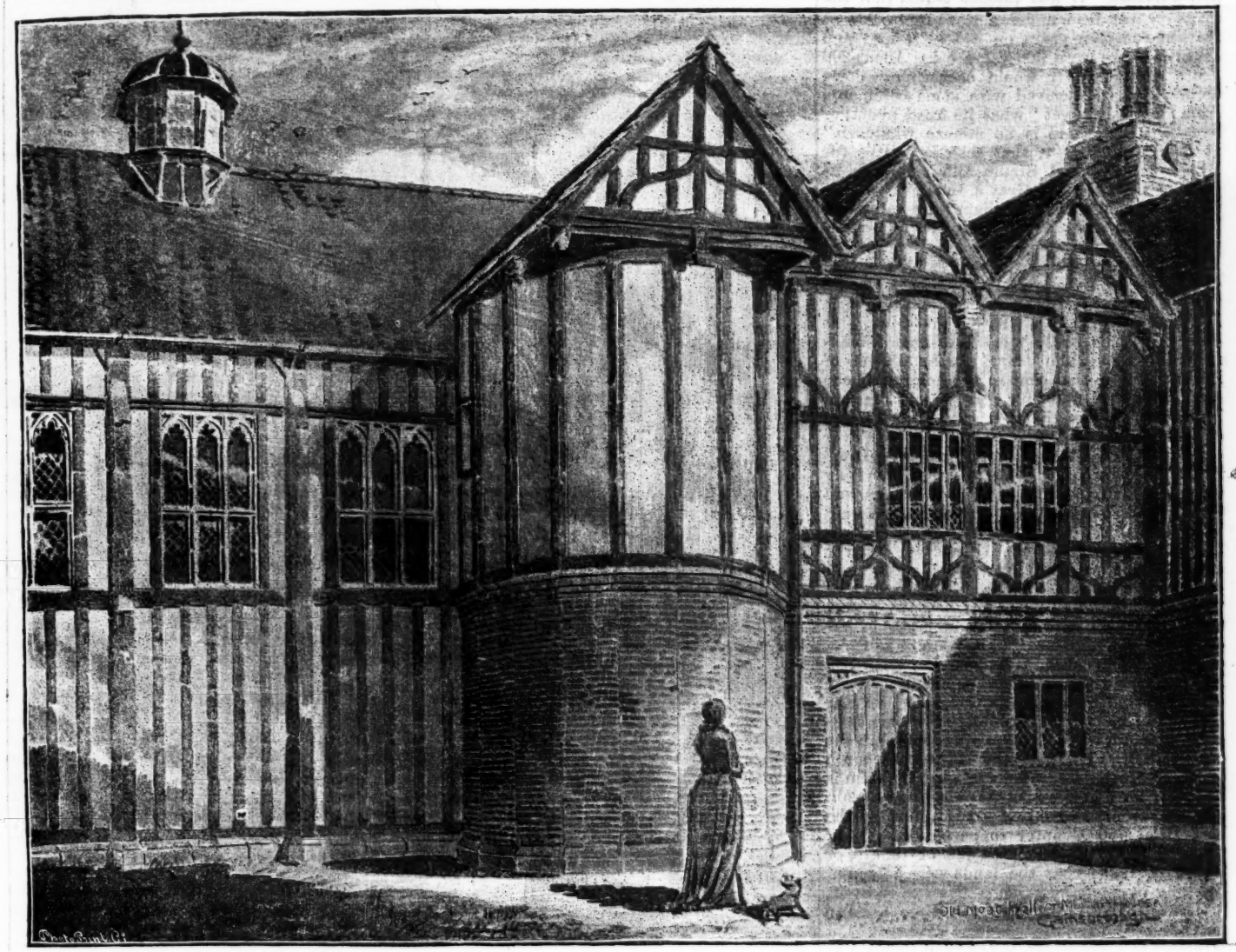
Boughton Aluph (sixteenth century).—"Dulcis sisto melis vocor campana Gabrielis."

Minster-in-Thanet (sixteenth century).—"Holy mare pray for vs."

Preston-by-Faversham.—"Love God, 1575."

Stodmarsh.—"Above all things love God."

Of the "art in the belfry" we can say but little. The most interesting bell, that of Leeds Castle, has some pretty medallions reproduced in the pages before us by process blocks. It is of foreign make, our author says French. The stops and signs on the bells generally are curious, but they do not need much comment with respect to their artistic design. William le Belzetere used a good alphabet, specimens of which are figured. A more elaborate set of letters, crowned capitals of beautiful design, used by Stephen Norton 1363–92, is also given, as is likewise a plainer and thinner lettering ascribed to William Burford, 1371–92. Most people would consider this alphabet to be the earliest of the three. A fourth, used by William Oldfield, of Canterbury, 1536–60, attests its



Old Moat Hall or Manor House, Gainsborough.—From a sketch by Mr. A. Whitehead.

date by its appearance, and it is a curious example of the return to the use of capitals in bell inscriptions.

The work consists of three parts, the first being an account of the bells and their founders in order of date. The second, and by far the shortest, is devoted to the local uses of the bells, with notices of such old customs as have survived to the present day, or are traditionally known to have existed.

These consist, for the most part, in survivals of the use of the old morning or evening "ave" peals, while the curfew is still rung out at fully twelve churches. Many curious examples of the use of the passing-bell are given. In another place our author falls foul of Gray's well-known "Curfew tolls the knell of parting day," which he calls a pretty bit of poetical fiction. "A bell which is rung at 8 p.m. in the winter months only (there would be no fire to "cover" in the summer) can hardly be said to herald the departure of a sun which had set three or four hours before."

The third part, devoted to the alphabetical inventory, as we venture to call it, is the longest, and, of necessity, the dryest part of the book. It is enlivened, however, ever and anon by some quaint quip or bit of humour. It contains many curious extracts from parish registers, some of which, from Aylesford, Bethersden, Birchington, Canterbury, and many others, are of length. The contract with Thomas Hatch, 1635, for recasting the tenor bell at Loose, is given in full, as is also that for Sowting, 1721, cast by John Waylett, at Hythe.

We congratulate the author on his performance, and leave the perusal of the book with surprise that the materials for it should have been collected by him and his helpers within the short space of three years and a half.

The Art Union of London will hold its annual meeting and prize distribution on Tuesday, May 1st, in the Adelphi Theatre.

"THE OLD HALL," GAINSBOROUGH.

This fine old Hall occupies the site of a very ancient castle, foundations of which still exist, holding a strong position on a raised bank overlooking the Trent, being erected to prevent the incursions of the Danes up the river.

In the thirteenth century it was held by the Talbots as Lords of the Manor, passing to William De Valance, Earl of Pembroke, and was destroyed during the Wars of the Roses.

The present Hall was erected in 1470 by Sir Thomas Burgh, whose family then held the property as Lords of the Manor, it being added to at successive dates until the end of the Tudor period.

In 1696 it passed to the Hickman family, and from them to the Bacons, in 1827, the present Lord of the Manor being Sir Hickman Beckett Bacon, premier baronet.

It forms a quaint group of buildings planned as a quadrangle (the accompanying view showing part of the inner portion facing the quadrangle), the centre portion being occupied by the large banqueting-hall, entrance, staircase, &c. Mostly built in the half-timbered style, the large hall has a very fine open-timbered roof.

The wings are mostly of brick of a later period, one being occupied by the kitchens and servants' rooms, with several fireplaces projecting on the outside, and forming a picturesque group of chimney-stacks.

The other wing is occupied with smaller residential rooms, and finished at the angle to the gardens with a turreted and embattled tower, a portion of which is seen in the view.

The Hall was visited in 1484 by Richard III. on his return from York, and by Henry VIII. in 1509, and also in 1541. It is supposed that he met his last wife here,—Catherine Parr,—as she was the widow of Edward Burgh, Sir Thomas Burgh's son.

A. Whitehead.

BARNARD'S INN, HOLBORN.

We do not propose to contend, as against such authorities as Lord Bramwell and Serjeant Pulling,* for the existence of a Legal University within our midst. But it is a fact, though not commonly remembered, that the degree of Serjeant-at-Law yet survives,—it may be conferred at the Lord Chancellor's option,—albeit that by the operation of the Judicature Acts the accession of new members to Serjeants' Inn was practically stopped. Thereupon, in 1877, the then Serjeants, selling the freehold in Chancery-lane which they had purchased in 1834 of the See of Ely, wound up their corporate affairs. Doing what they liked with their own, they in effect dissolved Serjeants' Inn. It was scarcely a matter of surprise, then, that such a precedent should be followed in another quarter, or that many of the old arguments should be rehearsed when, as recently at Staple Inn, all traditional obligations were disregarded by the vendors.† And now, a somewhat similar proceeding is projected with respect to Barnard's Inn, by the trustees for the Ancients and Companions of that time-honoured society.

Barnard's Inn stands between Staple and Thavies Inns, behind the houses at the north-western angle of Holborn and Fetter-lane, and over against Furnival's, and the site of Scroope's, Inns. According to evidence given in 1855 before the Royal Commission on the Inns of Court and Chancery, not much is known of the Society's early history. The treasurer deposed that its rents amounted to 1,000*l.* a year, and that the community consisted of a Principal, five Ancients, and nine Companions, —the last-named being chosen by the Principal

* See their letters in the *Times* of November, 1886, and Serjeant Pulling's "Order of the Coif."

† Sold at auction on November 26th, 1886, to the Prudential Assurance Company, shortly after the sale by the "Ancients" to Messrs. G. Trollope & Sons. The second sale did not include the southern block, which had meanwhile been purchased by Government.

and Ancients. It was further stated that the property was held under a lease renewable at rests of fourteen years on a 1,400*l.* fine; and that the books were 300 years old. About 200 years ago a reader would occasionally come across, and be received with some ceremony, from Gray's Inn, yet "what he read about, or who paid him, there is no minute whatever." It is clear, however, that both Barnard's (or Bernard's) Inn and Staple Inn belonged, as Inns of Chancery, to Gray's Inn; just as the former dwellings of Sir William Furnivall, *temp.* Richard II., and John Thavie, the armourer, *temp.* Edward III., passed to the Benchers of Lincoln's Inn as colleges or houses for students or practisers of the law of chancery,—*vide* Sir George Buc, in Howes, edition 1631.* The Harleian MS. 1104 says that in 31st Henry VI. this house was a messuage belonging to Dr. John Mackworth, Dean of Lincoln, and in that time in the holding of one Lyonel Bernard, and "for that the said Bernard lastly next before the conversion thereof into an Inn of Chancery therein dwelt, it hath ever since retained the name of Barnard's Inn." Dean Mackworth died in the year 1451, devising his town house at Holborn to the Dean and Chapter of Lincoln. His executors, whereof Thomas Atkins, citizen, was one, completed the conveyance. In an Inquisition at the Guildhall, before John Norman (Lord Mayor, 1453-4), the king's escheator, a jury agreed that "it was not hurtful for the king to license Thomas Atkins, citizen of London, one of the executors of John Mackworth, Dean of Lincoln, to give one messuage in Holborn, ... called Mackworth's Inn, but then commonly known by the name of Bernard's Inn . . . . to the Dean and Chapter of Lincoln, to find one sufficient chaplain to celebrate divine service in the chapel of St. George in the cathedral church of Lincoln, where the body of the said John is buried, ... in part of satisfaction of 20*l.* lands and rents which Edward III. licensed the said Dean and Chapter to purchase to their own use, either of their own fee or tenure, or of any other, so that the lands were holden of the king *in capite*." From a passage in Stow, it is also clear that about this time the Inn had become an Inn of Chancery. He speaks of a tumult in Fleet-street, in the 32nd Henry VI., for their share in which the Principals of Clifford's, Furnival's, and Barnard's Inns were sent prisoners to Hertford Castle. The Inn had, ere this, been let, as we show above, to Lyonel Bernard.

John Mackworth, of Mackworth, county Derby, was appointed Dean of Lincoln in 1422. His connexion with this house is commemorated by its coat of arms, party per pale, indented ermine and *sable*, a chevron frettée *or* and *gules*: crest, a wing *argent*. This coat had been granted to the Mackworths on August 1, 1404, by John Touchet, Lord of Audley, for services rendered by John and Thomas Mackworth and their ancestors. Hatton (1708) describes the Society as consisting in his day "of a Principal and twelve Ancients, besides the Gent. of the House." He goes on to recount that the members are obliged to be in Commons a fortnight two terms, and ten days the other terms, forfeiting 5s. a week by absence. He adds,—"In Commons, they appear, as the rest of the Inns, in their Long Robes and Knit Caps. There are no Mootings here of late." The discontinuance of the motes, or moots, points, of course, to the gradual change that had come over the Inn as a home of legal study. In his evidence before the Select Committee on Legal Education (1846), Lord Campbell said that these exercises had fallen virtually into disuse about the end of the seventeenth century, or were continued merely as matters of form. They were revived, by the way, at Gray's Inn, and with signal success, in 1875.

The hall is of red brick; well lighted by latticed windows, north and south; 30 ft. high, and 36 ft. by 22 ft. on plan. It is said to have been originally built in 1450, or even before that year; and, though altered in several respects, it retains the leaden louvre of that time. The earliest mention of the hall is in an entry of 1560,—"The bow window of the hall was made in the time of Thomas Wilson, Principal." In 1724 this window was rebuilt "in fashionable style." Other changes comprise the blocking up of the door in the eastern wall, an apartment to the north, and a new pension-room. Here are portraits of a Principal, Lord Chief Justice Holt; of Charles II., Lords Verulam and Burleigh, and the Lord Keeper Coventry. Over the Holborn portal are the figures and initials: 1758—P.R.W. The present houses, Nos. 6 and 7, were rebuilt after the "No Popery" riots of 1780, when the flames advanced from Langdale's (now Anderson's) distillery, in Holborn. The conflagration in this quarter is vividly described by Charles Dickens in "Barnaby Rudge," and in his "Great Expectations" that same writer dwells *more suo* upon the somewhat forlorn and neglected condition of the garden and courts in later times. The hall, the inner courtyard, and the Fetter-lane front form the subject of three views taken in 1879 by the Society for Photographing Relics of Old London. We may add that the records, taken with those at Lincoln, exhibit an almost unbroken line of the Principals' names, extending over more than 400 years, beginning with that of Thomas Chambre, who was the first to fill the office after 1454.

* Confer also W. Herbert's "Antiquities of the Inns of Court and Chancery," 1804, and Mr. W. R. Douthwaite's "Gray's Inn," 1886.

The Castle Chapel at Laer.

THE CASTLE CHAPEL AT LAER.

IN the paper which we recently published upon "Flemish Châteaux and their Surroundings" [see our last vol., p. 725], we had occasion to refer to the fact that the Castle Chapel was frequently projected out from the main structure over the moat; sometimes its apse was supported upon a corbel, and at others upon columns rising out of the walls. Of this latter treatment the sketch which we now publish is an interesting example. The apse of the chapel, in this case, is five-sided, and capped with an ogee dome, terminating in a little bell turret.

The space below the chapel forms a kind of covered porch, or water-gate, to the castle. The building no longer exists in the condition shown in our sketch, which is a "restoration" founded upon a view published in Somers and Ravenstein's "Castella et Pretoria Nobilium Brabantiæ."

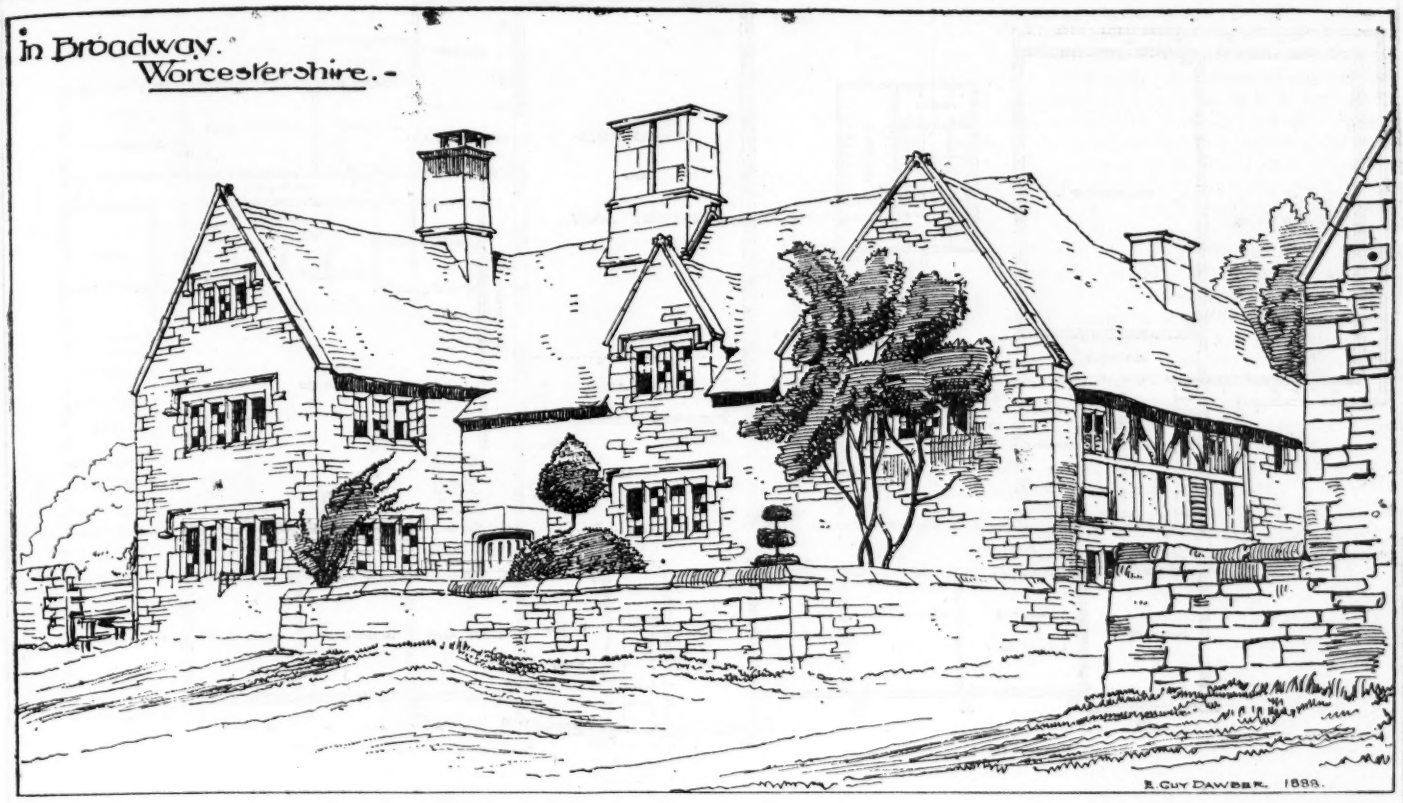
A WORCESTERSHIRE VILLAGE.

BURIED deep down in a valley of the Cotswolds, geographically in Gloucestershire, but really on a peninsula of Worcestershire, nestles the village of Broadway. Its name probably is derived from that of the great road or trackway leading from the West of England to London and the Eastern coast, and here called the "Bradweia," and which is referred to in an old MS. as "the broad and highway from the shepherdes cottes on the mounted wolds down to the most fruitful Vale of Evesham." After having been a "royal demesne" of the Mercian kings and their successors, it fell into the hands of the abbots of Pershore, with whom it remained for many years.

The village is charmingly situated in the most lovely country, and surrounded by hills, from one of which, about a mile through the village, thirteen counties are said to be visible, as well as the "Black" and other Welsh mountains, the "Malvern Hills," the "Clent Hills," the "Wrekin" in Shropshire, and on a clear day the city of Warwick and the three spires of Coventry, and occasionally the "White Horse" Hill in Wiltshire.

Broadway consists of one long, wide, straggling street, with a large open triangular green at one end branching out into two roads, to Cheltenham on the left and to Evesham, about six miles off, on the right. Its great charm is the distance from a railway station, and consequent quiet and peacefulness, and to the painter, architect, or any one fagged with the worry and bustle of London life there could be no more delightful spot to visit.

The houses on either side of this street, or road rather, are quaint and picturesque, being built of the local stone, with stone slab roofs, mostly dating from the end of the sixteenth to the middle of the seventeenth centuries. On every side are high-pitched gabled roofs, with wonderful stone and iron finials, mullioned windows and bays, leaded casements (many of them containing the original glass), carved and



moulded doorways, and tall stone chimney-stacks, and all weathered to most beautiful colours. Many of the houses are in line with the street, but some are detached with low stone walls in front, enclosing little old-world gardens, with clipped and shaped yew trees.

Half-way down the street, on the north side, is a fine dignified four-storied building, with projecting gabled wings, and two high-gabled dormers in the centre over the entrance below. This was occupied as a hostelry, by one John Treavis, or Travers, in or about 1549 (*temp.* Edward VI.), and was well known before that as the "White Hart" Inn. In 1682, it was in the possession of one John Treavis, under the will of his father, Matthew Treavis, "citizen of London and member of the Salters' Company." Some years ago, the Lygons, of Madresfield, purchased the property, and its old name was abandoned for that of the "Lygon Arms." It abounds in interesting bits of detail, old oak doors and hinges, old glass and casement fastenings, stone chimneypieces, plaster ceilings, and a fine oak panelled room, occupied on one occasion by Cromwell. The present proprietor is very proud of his inn, and delights in showing its beauties, and, what is very rarely the case, understands and appreciates them.

In another inn, now a private residence, are the old beams, floors, and panellings, &c., that were in the house when Charles I. was said to have slept there. It is a peculiar fact, though, that in nearly every old manor-house or inn in this district either Charles I. or Queen Elizabeth passed a night!

Standing near the village green is the old "Grange" of the Abbots of Pershore, attached by them to the vicarage of Broadway in the fourteenth century. Nothing now remains but a plain stone-roofed building with a few good Decorated windows and mouldings. In another of the houses, now inhabited by a poor labourer and his family, is a good oak panelled room. The kitchen has a fine moulded and carved open-beamed ceiling, and a large roomy ingle-nook, with the old seats and fire-hooks, used to-day just as they were 200 years and more ago. Some of the casements in this house have the original painted quarry-glazing in them, with a bird, flower, or other quaint design, picked out in yellow lines in each pane, like the Dutch glass of that period. The casement fastenings are especially good, and nearly all vary, as many as five different designs being found in one small house. The ironwork throughout is of capital detail, and well worth noting. Generally, the ground-floors are paved with stone; the upper floors, staircases, and other fittings being in oak.

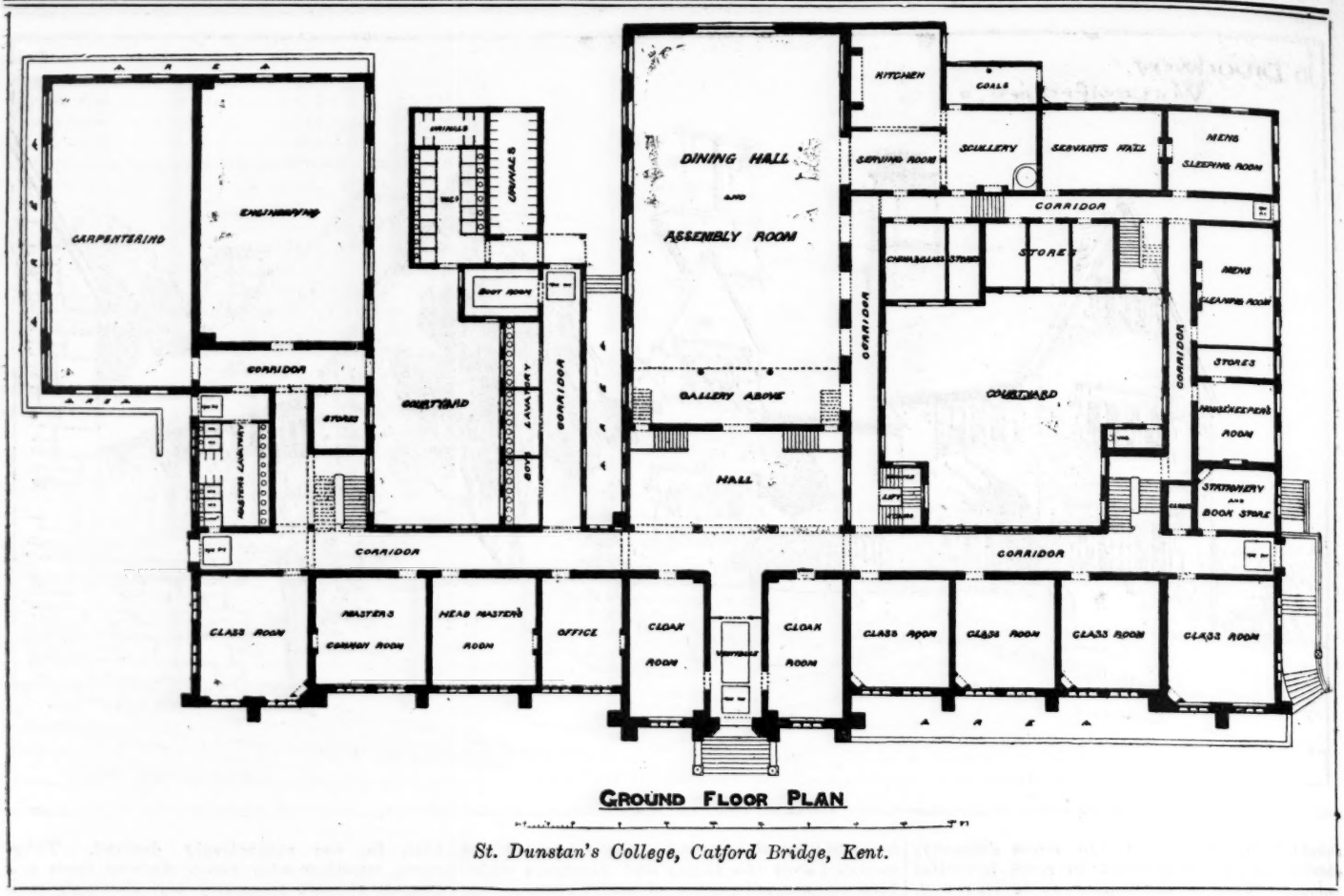
One is struck by the prevalence of the lintel in this village. The flat-headed mullioned windows with massive wood lintels inside, the huge baulks of oak and roughly squared and moulded over the ingles and fireplaces which form an integral portion of nearly every house, and the stone door-heads with the flat four-centred arch, if it may be so called, shaped out of the underside.

In an old house at the other end of the village, surrounded by a high wall, a small colony of American artists have established themselves and their studios, amongst them being a well-known painter and a notable contributor to Harper's and other illustrated magazines. In fact, Broadway is much affected by Americans, and during the summer months it has quite a little season. Any one wishing for a good sketching holiday, combined with fresh air, quietness, and something out of the commonplace, could not do better than stay at the "Lygon Arms," and when the village has been "done" the neighbouring country can be scoured, abounding as it does with delightfully quaint old abbey-barns, manor-houses, and churches.

E. G. D.

THE ROYAL PARKS AND PLEASURE GARDENS.

The Lords of the Treasury recently issued an amended copy of a return,—moved for last Session by Mr. Pickersgill, M.P.,—relative to our Royal Parks and Pleasure Gardens. The return shows in respect of each enclosure the four particulars following:—Total area, area from which the public are excluded, the use or uses to which this reserved area is applied, and the public revenue derived from such area. Taking firstly the London parks, it appears that out of Battersea Park,—199 acres, 2 roods,—are reserved very nearly 2 acres for a frame ground, a stone-yard, and three lodges. This park, we may mention, was laid out in 1857–8, on the site of Battersea Fields, where it was customary for the Westminster boys, on St. David's Day (March 1st), to jump all the ditches between the Red House, over against Chelsea Hospital, and Battersea Bridge. Hyde Park covers 360a. 3r. 12p. The reserved plots are twenty-one in number, and equal 8a. 1r. 18p. The three acres of Hamilton-gardens yield a yearly revenue of about 466*l.* paid by keyholders, at 3 guineas each; the other plots are attached to the ranger's, the superintendent's, and ten park-keeper's lodges; together with the police-station, the Royal Humane Society's Receiving House, the magazine, guard-house, &c. The total area, 472a. 2r. 18p., of Regent's Park includes Primrose Hill (61a. 3r. 31p.) and the roads around the park (39a. 0r. 9p.) The general public are excluded from the Zoological (31a. 1r. 5p.), the Botanical Society's (18a. 1r. 22p.), and the Toxophilite Society's Gardens (6½ acres); from which revenues of 358*l.* 0s. 9d., 360*l.*, and 181*l.* 6s. are respectively derived. These sums, together with those derived from the Baptist College (formerly Mr. Holford's residence), St. Dunstan's Villa (the late Marquess of Hertford's), six other private houses, and the house of the Master of St. Katharine's Hospital, which, however, is not occupied by him, make up a total of 2,344*l.* 18s. 10d., as revenue from 124a. 2r. 18p., all in charge of the Commissioners of Woods. The Commissioners of Works receive about 212*l.* per annum for the pleasure-grounds, lately curtailed to 8a. 0r. 11p., by the lake, and an additional reservation is made of 2a. 2r. 39p. in respect of nursery-grounds, store-yards, &c., with six officials' lodges. No revenue is payable on account of the 53a. 3r. 10p. of Green Park, as diminished by recent changes at Hyde Park-corner; or of St. James's (93 acres) and Victoria Park (212a. 0r. 11p.). But the sale of timber and feeding of cattle in Richmond and Petersham Parks (2,470 acres) yield 500*l.* yearly. In Richmond Park the enclosed plantations, mowing ground, deer paddocks, ranger's meadow, arable land, and the Queen's kitchen garden, cover an aggregate of 424a. 0r. 11p. The keepers' lodges here, together with the private residences known as Thatched House, Pembroke and White Lodges, appropriate an additional 16a. 1lr. 3p. "No part has been or is open to the public" at Richmond Old Deer Park, which includes the Queen's Cottage, Kew Gardens, and the Observatory. The revenue is stated at 972*l.* 1s. 3d. for a total area of 363a. 3r. 27p. Kew Royal Botanic Gardens and Arboretum extend over 248½ acres. So, again, the whole 752 acres of Hampton Court Park are reserved as grazing ground, with annual profits of 280*l.* for herbage; 90*l.* for residents' keys, at one guinea each, and certain small rents; and about 100*l.* for the sale of deer-skins and horns, and fees for venison distributed under royal warrant. This is the reserve over which Mr. Labouchere lately made merry in the House as touching the "cream-coloured horses." The public have no access into nearly one-third of Bushy Park, where the revenue amounts to 91*l.* for grazing, wood, and timber. At Greenwich (185 acres) a total reserve of of 37a. 0r. 4p. comprises 16a. 0r. 28p. for the ranger's lodge,—a grace and favour residence; and 15a. 2r. 1p. enclosure for feeding the deer, and for their protection in the fawning season, "on public holidays," and in winter time. At Kensington Gardens (274a. 2r. 18p.) are reserved 4a. 1r. 39p. wherein to rear plants for decorating sundry Government parks, grounds, and gardens; and at Windsor Home Park 3a. 2r. 21p. out of 73a. 2r. 26p. being mostly plantation land. 1,395a. out of 5,300a. represent the reserves of Windsor Great Park. This is made up by 212, lakes and ponds; 286, plantations,



GROUND FLOOR PLAN

St. Dunstan's College, Catford Bridge, Kent.

&c.; 319, paddocks; 331, her Majesty's farm; and 247, official residences and tenancies. The whole 614½a. of Holyrood are practically open; but nearly 1,753a. of Phœnix Park, Dublin, are shorn of 422a., in all, that are wholly unproductive, being set aside for vice-regal, military, and constabularial uses, park service, five cricket-grounds, and the Royal Zoological Gardens.

Illustrations.

ST. DUNSTAN'S COLLEGE, CATFORD BRIDGE, KENT.

THIS building is now in course of erection on land belonging to the Governors of the Charities of St. Dunstan-in-the-East, on the north side of Stanstead-lane, and close to the Catford Bridge station on the South-Eastern Railway. The object of the college is to provide a thoroughly good middle-class education at a moderate cost, special attention being given to the teaching of technical and commercial subjects. Accommodation will be provided for 400 boys, including sixty boarders on the hostel system, preference being given to those of the parish of St. Dunstan-in-the-East. To the endowments of this parish the college owes its origin.

The building is in the Early Tudor style, and is built of red brick, with terra-cotta dressings and tile roofs.

The building contains :—On the ground-floor, entrance-hall, two hat and coat rooms, office, head-master's room, masters' common-room, five class-rooms, book-store, assembly-hall, lavatories, and three staircases. On the first floor,—lecture theatre, lecturers' room, library, music-room, drawing school, four class-rooms and day-room. On the second floor,—four dormitories, two bedrooms for masters, bath-room, temporary sick-room, linen-room, and w.c.'s.

The Domestic Department contains,—kitchen, scullery, serving-room, housekeepers' room, servants' hall, cleaning-room, stores, &c., with sleeping-rooms and work-rooms on the first floor.

The Technical Department comprises, on the ground-floor,—carpenter's shop, 65 by 30, and engineering shop, 55 by 35; and on the first floor, chemical laboratory, 65 by 30, and physics laboratory, 55 by 35.

The entrance-hall, corridors, staircases, and the floors of the dormitories are of fire-resisting material.

In the grounds are lavatories, water-closets, urinals, boot-room, covered playground, fives-courts, cricket and football grounds.

The building is from the design of Mr. Edward N. Clifton, F.R.I.B.A. (of the firm of E. N. Clifton, Son, & Hope). Messrs. W. Brass & Son are the contractors; Mr. J. Sweeting is clerk of works; and Mr. J. Wheeler the general foreman.

WINDOWS, CHRIST CHURCH, OXFORD.

THE first of the two windows which we illustrate, designed by Mr. Burne Jones, is in the west end of the south aisle, and represents, as will be seen, the subject of Faith, Hope, and Charity. The figure of Hope has a greyish blue drapery, varied in tint, and diapered with the pattern of a flower in stain. The scarf floating round the figure is sky-blue in tone, and lighter than the dress. The figure of Charity has a ruby over-mantle, with white dress underneath; while the figure of Faith has a blue dress beautifully and richly diapered, the upper portion with a sumptuous Venetian design familiar on the brocades of the sixteenth century, and the lower portion with a sprig of foliage. The tone of the backgrounds is a rich warm green, and is very carefully painted with foliage, and the contrast yielded by the pale blue of the drapery and the rich warm green of the background in the two outside windows is most harmonious and striking. The detail in this window is very elaborate, and every part of it bears traces of care and thought.

The other window which is illustrated is one of those in the east end of the church, consisting of three figures, a memorial figure between two angels; each with what may be called a predella panel beneath. The draperies of the principal figures are white and undiapered. The wings of the angels are a pale blue. The curtains hanging at the back of the figures are a rich greenish blue, and the ornamental background is cut out of violet-coloured glass, an uncommon combination, but one producing a very harmonious and striking effect. Of the three lower compartments, the central one is a beautiful design, the circle of angels round the seated figure, cut out of tones of ruby, having a very fine effect. The left-hand small panel is a very striking composition also, with a remarkable dignity of effect, in spite of its small scale. Under this is the sentence (in Latin), "The fear of the Lord, that is wisdom"; under the centre panel, "Blessed are the pure in heart, for they shall see God"; and under the right-hand one, "So he giveth his beloved sleep." Along the upper bands below the larger figures is carried continuously the Latin equivalent of the sentence from Revelations,—"The Lamb . . . . shall feed them and shall lead them unto living fountains of waters, and God shall wipe away all tears from their eyes."*

As a memorial window, the conception of the design is singularly beautiful and pathetic.

The drawings were made from the windows by Mr. F. Miller.

SKETCHES AT WELLS CATHEDRAL.

WE give two pages of sketches from Wells by Mr. T. M. MacLaren.

One shows the entrance bay of the chapter-house, with the delicate expression given by the long, slender, Purbeck shafts, which form such a marked feature in the architectural design of Wells Cathedral. The manner in which the extrados of the small vault over the entry stands out in front of the window plane above is, however, by no means a happy feature; it has an awkward and clumsy appearance.

The details of carving given on the other page represent the finest work of the period, very carefully and truthfully delineated.

CHOIR STALLS OF THE FRARI CHURCH, VENICE.

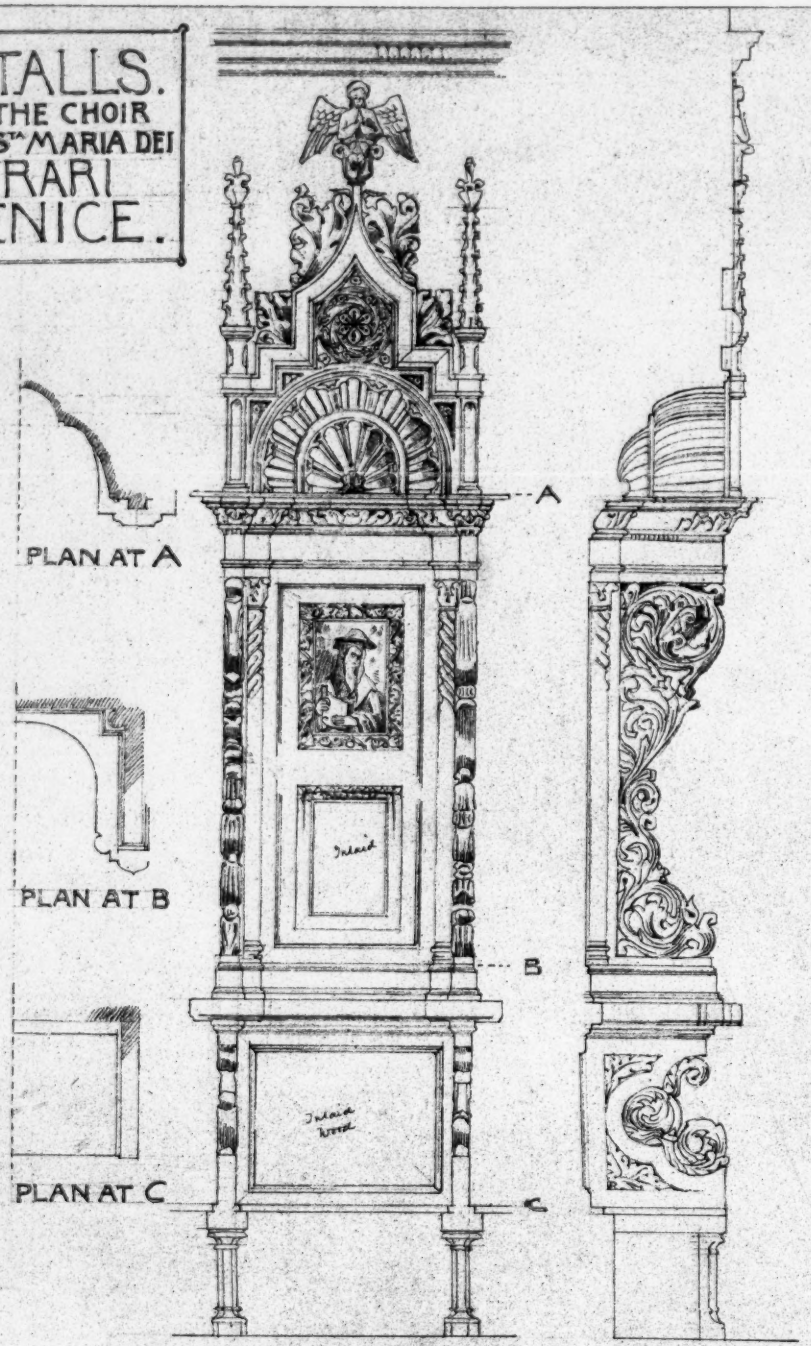
THE Church of Sta. Maria Gloriosa dei Frari, familiarly called "The Frari," which was built from the design of Nicolo Pisacco about the middle of the thirteenth century, is remarkable in many ways, and one of the chief sights of Venice. The beautifully-carved and inlaid choir-stalls extend into the nave of the church,—an unusual arrangement in Italy, though common enough elsewhere. The Tarsia inlay is said to have been executed by Giovanni Paolo or Marco di Vicenza in 1468, and the rest of the work is probably of about the same date.

THE MIRACOLI CHURCH, VENICE.

THE Church of Sta. Maria dei Miracoli is a charming little domed building of the Early Renaissance, standing about halfway between the Rialto and the celebrated Church of SS. Giovanni e Paolo. It was erected between 1480 and 1489 by Pietro Lombardo, who seems to have been partly responsible for the design, which is affected to a remarkable extent by the so-called Byzantine edifices of the city, and is very rich both inside and out, the Franciscan monastery, to which it was attached, having been a very wealthy foundation.

* The Latin as given on the window does not quite coincide with this, as the second word looks like "reget," "shall guide," or "govern."

STALLS. IN THE CHOIR OF Sta MARIA DEI FRARI VENICE.



SCALE.

Venezia 6 Oct 87 W Medlycott Tuke.

CARDINAL

FROM ONE OF THE STALLS IN Sta MARIA DEI FRARI. VENICE.

SCALE OF INCHES

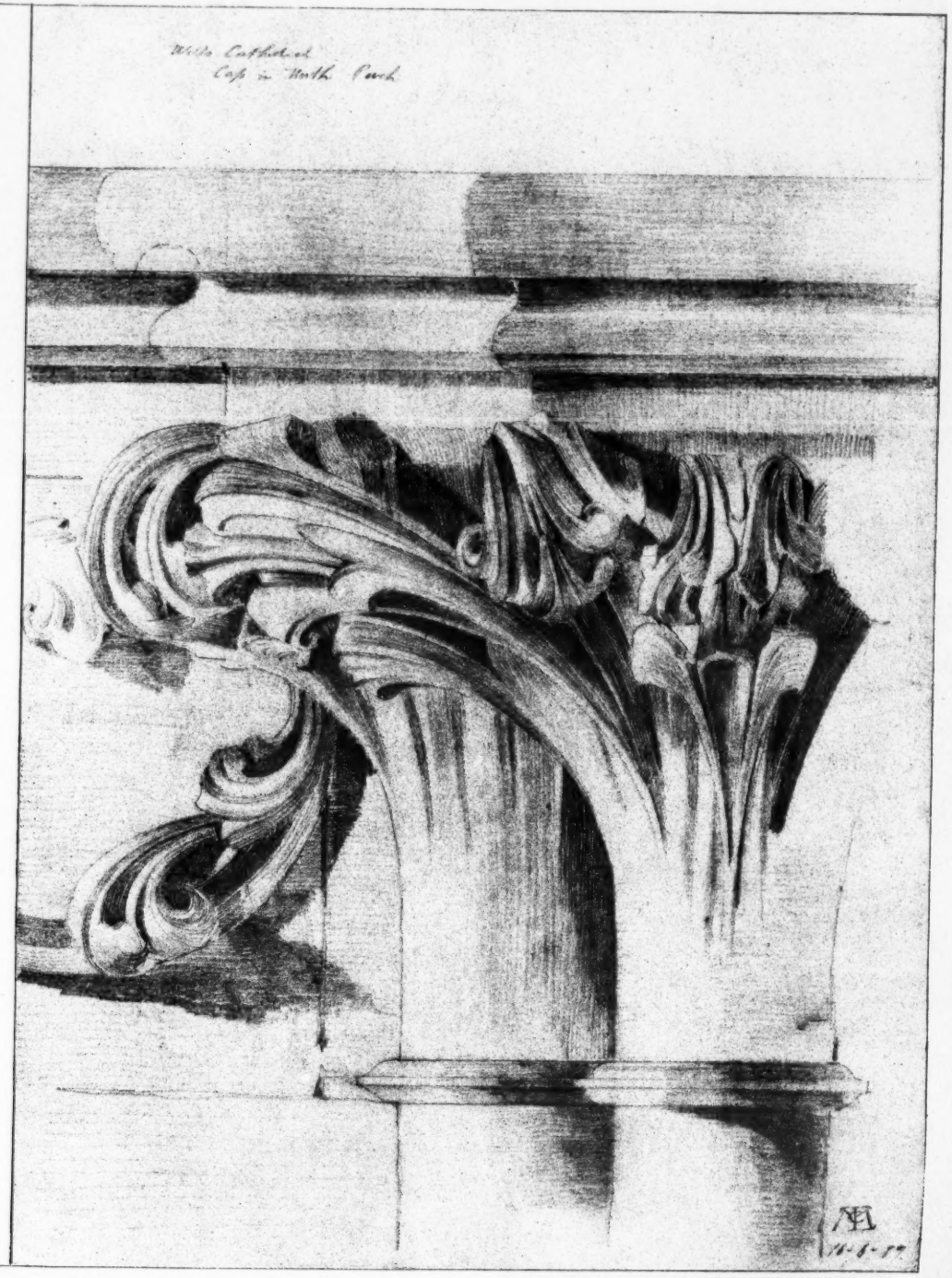
Venezia 7 Oct 87 W Medlycott Tuke

"INK-PHOTO" SPRAGUE & Co. 22, MARTINS LANE, CANNON ST, LONDON, E.C.

FROM SKETCHES BY MR. T. MEDLYCOTT TUKE.

FROM SKETCHES BY Mr. T. MEDLYCOTT TUKE.

"INK-PHOTO" BRAGUE & Co. 32. MARTINS LANE, CANNON ST. LONDON, E.C.

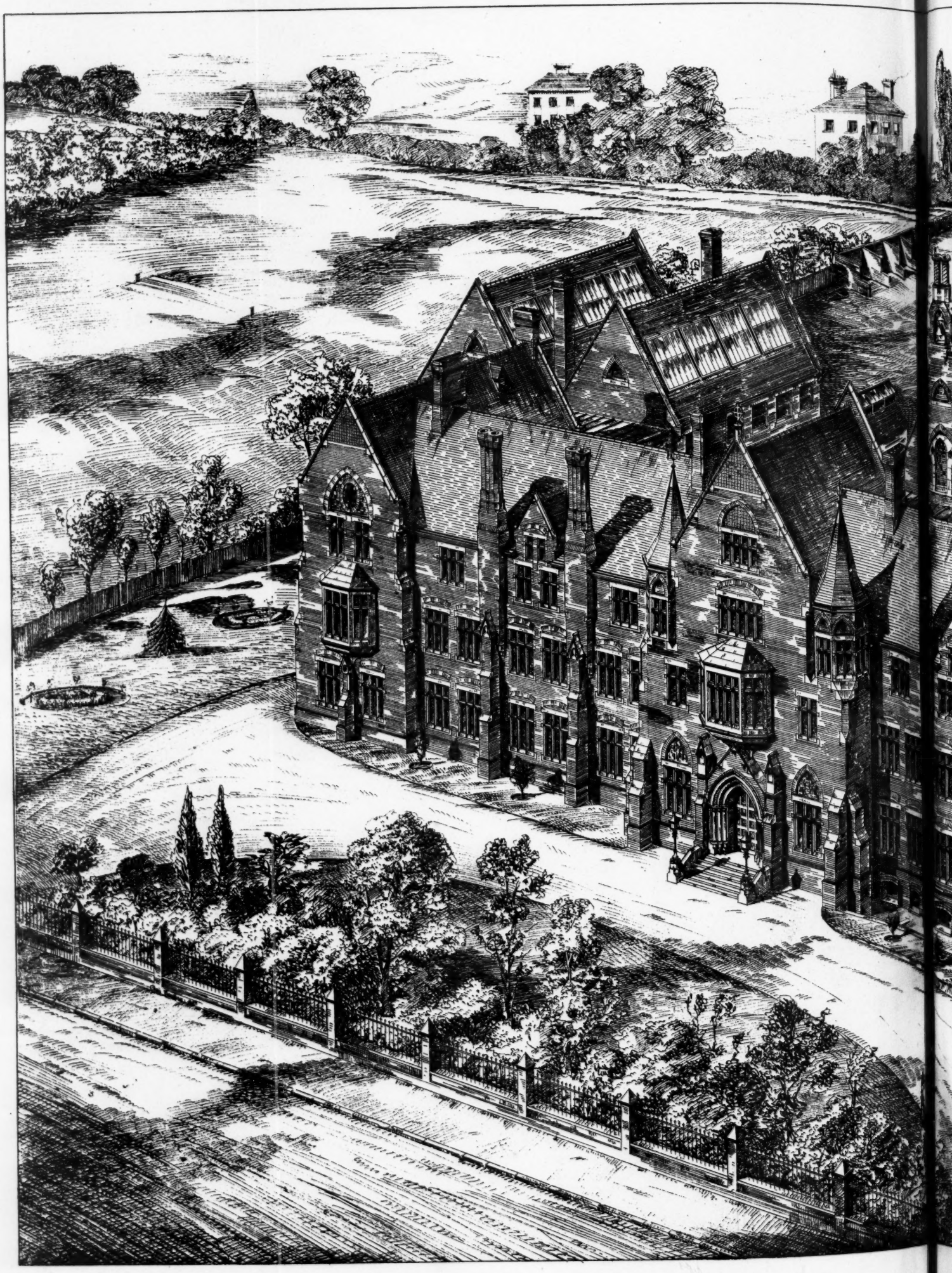


"INK-PHOTO" SPRAGUE & Co, 22, MARTINS LANE, CANNON ST, LONDON, E.C.

FROM SKETCHES BY MR. T. M. MACLAREN.

PHOTO-LITHO. SPRAGUE & Co 22, MARTINS LANE, CANNON ST, LONDON, E.C.

WINDOWS AT CHRIST CHURCH CATHEDRAL, OXFORD.—Designed by Mr. E. Burne Jones, A.R.A.



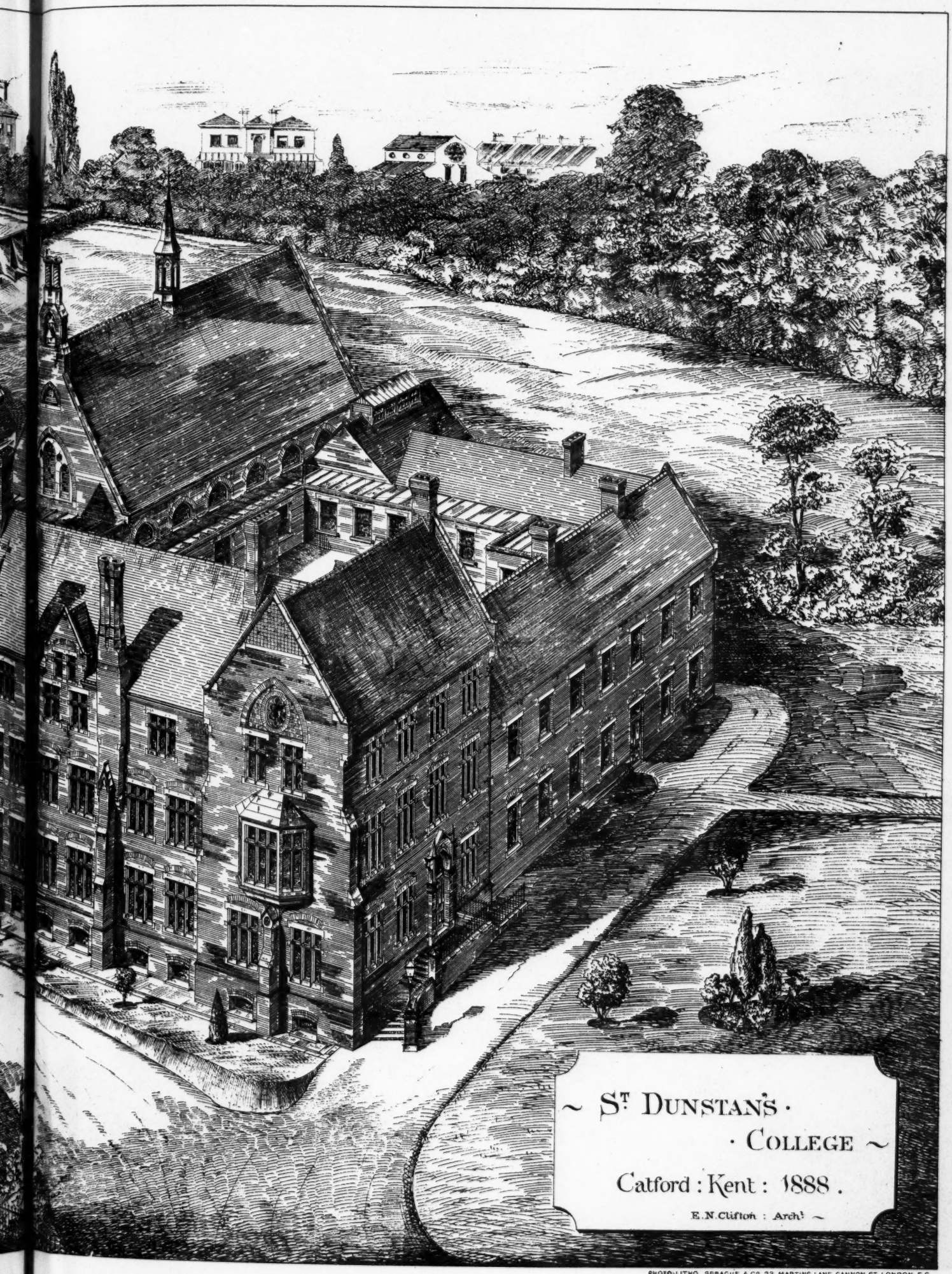
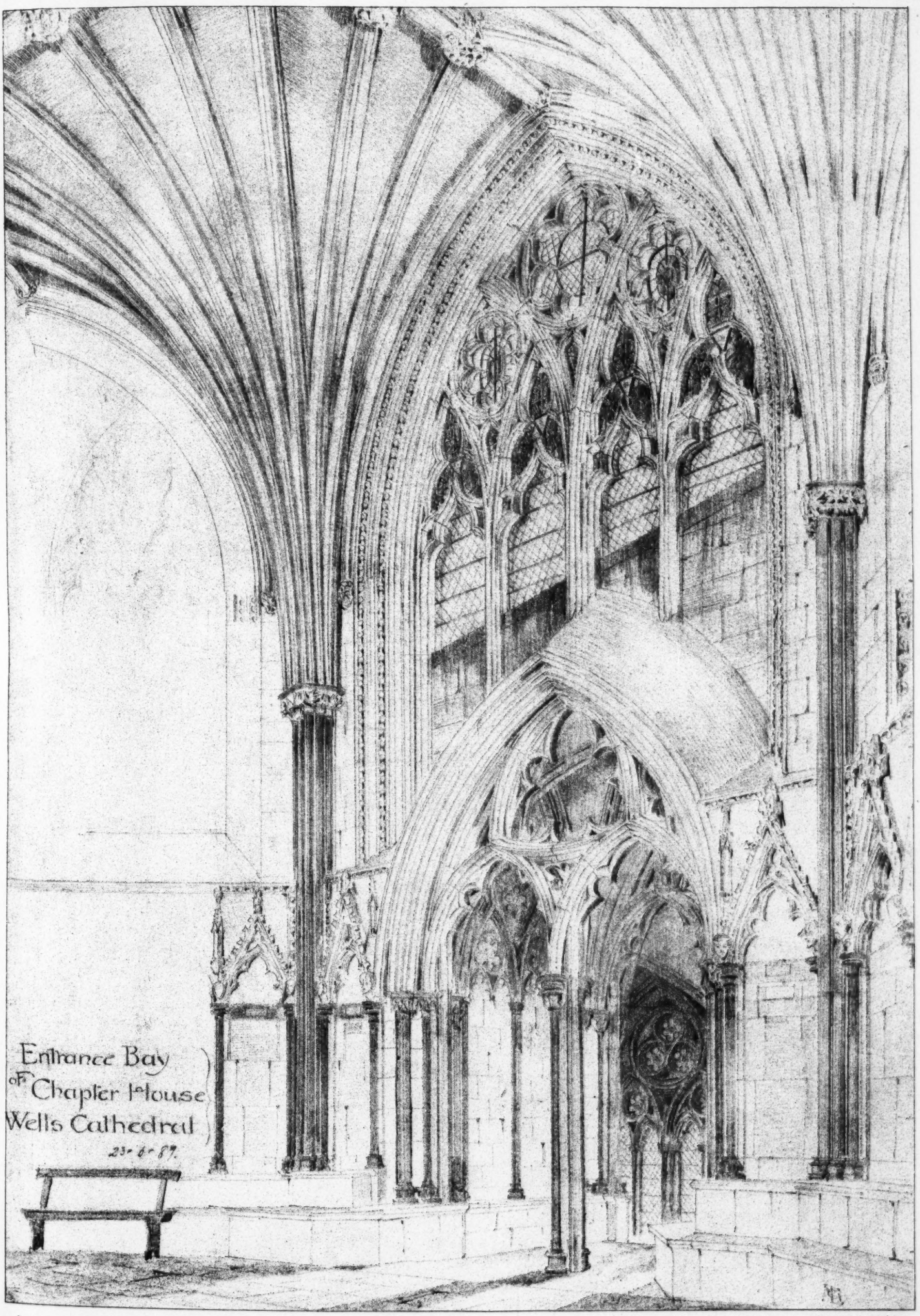


PHOTO-LITHO. SPRAGUE & Co 22, MARTINS LANE, CANNON ST, LONDON, E.C.

agnus regit illos et deducet eos ad vitæ
fontes aquarum et absterget deus
omnem lachrymam ab oculis eorum
timor domini ipsa est sapientia
beati mundo corde quoniam ipsi videbunt
cum dederit dilectis suis somnum

PHOTO-LITHO, SPRAGUE & Cº 22, MARTINS LANE, CANNON ST, LONDON, E.C.

WINDOWS AT CHRIST CHURCH CATHEDRAL, OXFORD.—Designed by Mr. E. Burne Jones, A.R.A.

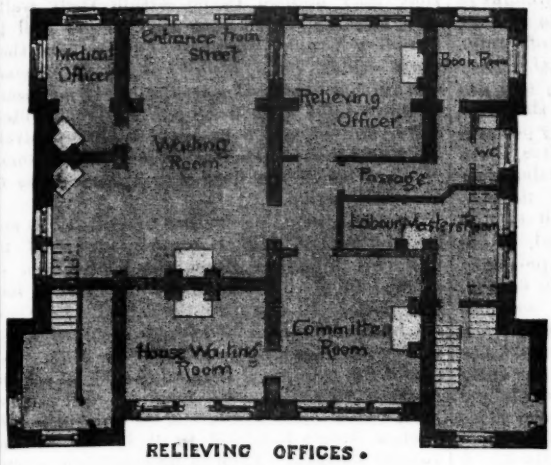


"INK-PHOTO," SPRAGUE & Co., 22, MARTINS LANE, CANNON ST., LONDON, E.C.

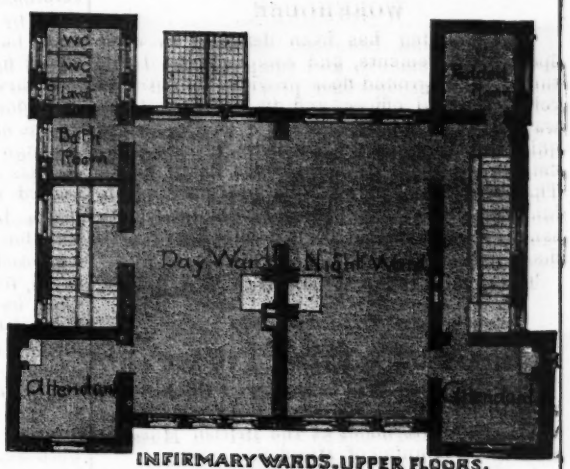
FROM A SKETCH BY MR. T. M. MACLAREN.

"INK-PHOTO," SPRAGUE & Co., 22, MARTINS LANE, CANNON ST., LONDON, E.C.

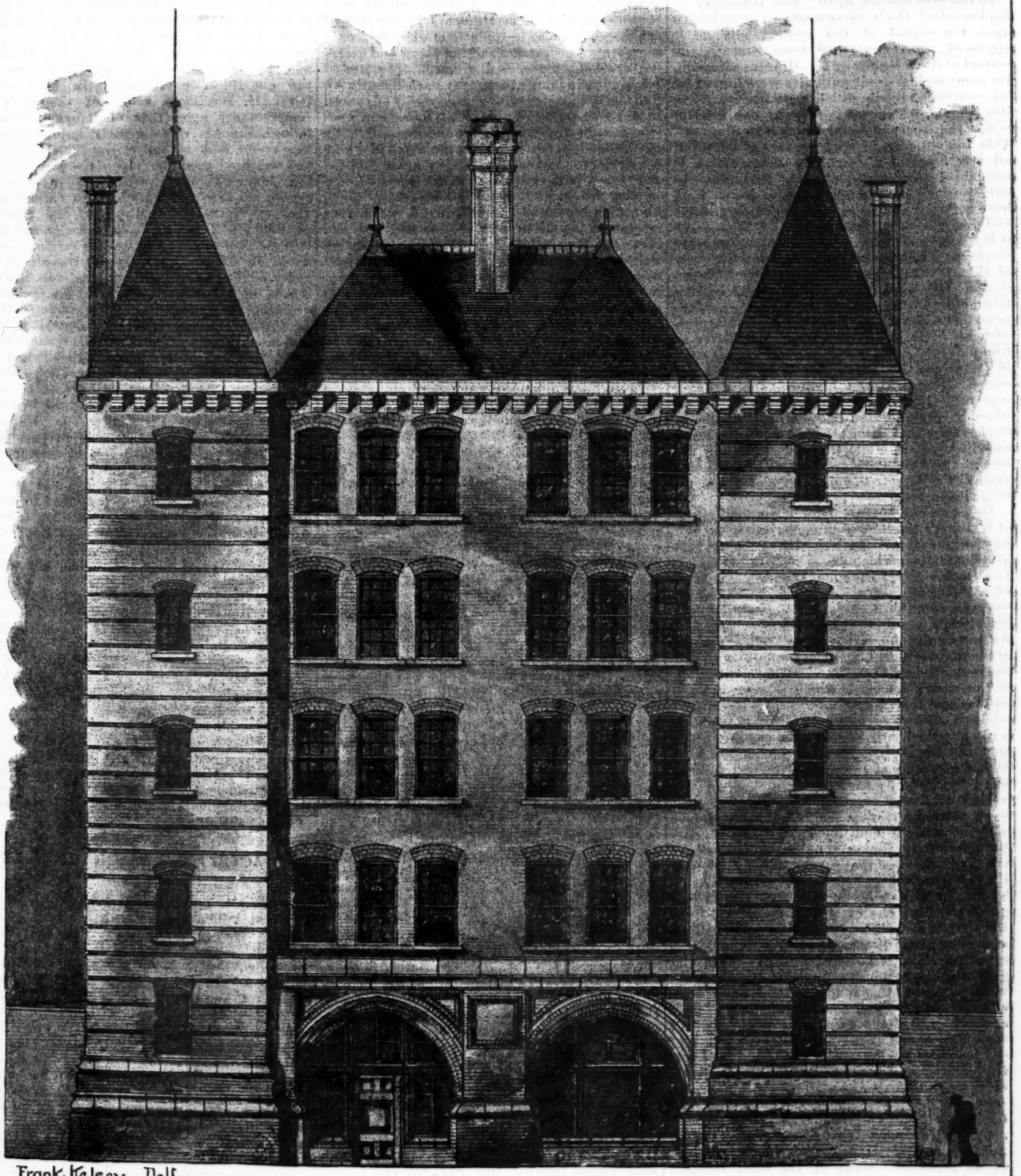
CHURCH OF THE MIRACOLI, VENICE.—From a Sketch by Mr. T. Medlycott Tuke.



RELIEVING OFFICES.



INFIRMARY WARDS.-UPPER FLOORS.



Frank Kelsey. Del.

New Infirmary, St. Giles's Workhouse, Endell-street.—Mr. William A. Pite & Mr. A. Beresford Pite, Architects.

NEW INFIRMARY, ST. GILES'S WORKHOUSE.

THIS building has been designed to meet special requirements, and completes the Institution. The ground-floor provides for out-door relief, medical officer, and dispenser; a large waiting and committee room. The sexes are quite separate, and have distinct staircases; emergency doors being provided on all floors. The first and second floors provide for imbecile inmates, with two padded rooms, and complete sanitary arrangements. The third and fourth floors provide for itch and bad leg cases.

The architects are Messrs. W. A. & A. B. Pite.

LECTURES ON BABYLON AND ITS ART.

THE following is a summary of the lectures which Mr. Boscawen has been giving on Wednesday afternoons at the British Museum since the beginning of March:—

In the first lecture, upon "The Discovery of Sepharvaim," the lecturer spoke at great length upon the aspect of the ancient city as it appeared when unearthed from beneath the mound of Aboo Hubba by Mr. Hormuzd Rassam. Its name and its great antiquity were proved by innumerable tablets which were discovered in the Temple, which was termed by one inscription, "the House of Light which is in Sippara." This temple was, in very truth, the centre of all the kingdom's life. In construction it resembled the Jewish temple, and the discovery of its sixteen quadrangles prove it to have been a building of undreamed magnitude and magnificence. Sepharvaim, or Sippara as it is sometimes called, was built upon the river Euphrates; but the constant westward tendency of this river so increased the distance between it and the city, that in 2200 B.C. King Khammurah was obliged to cut a canal to re-connect the two; this canal was termed, with no little grandiloquence, "The River of Khammurah and Benefactor of Mankind." It was in this city that Esarhaddon received Manasseh, the king of the Jews, a captive. It was here that Cyrus rested when he first entered Babylon; and it was in Sepharvaim that King Darius lived and ruled and died. It is a city that existed before the flood. Its tablets place before us the national, even the everyday life of a wonderful people long since passed away.

In his second lecture, upon "The Beginnings of Writing," Mr. Boscawen endeavoured to show how originally writing was the result of that graphic instinct which exists only in humanity. In all ages the first attempts at writing have been of a pictorial nature. And so it came to pass that the cuneiform characters introduced into Babylon by Turanian races were of this nature. At first of the simplest possible kind, the signs gradually developed, and were enlarged to suit the requirements of an ever-growing civilisation, so that the plain circle which represented the sun became the verb, "to shine," by the simple addition of some rays of light. A triangle with a ray attached to it, represented the eye. The soul was poetically figured by the picture of a bird, and a stalk of Indian wheat stood for the word "corn." To explain the undoubted connexion that has recently been discovered to have existed between the Chinese characters and the ancient cuneiform inscriptions, Mr. Boscawen said that a split occurring amongst the civilised tribes that inhabited Central Asia, that land so well termed the "womb of nations" by Sir Henry Rawlinson, they divided into two great streams, one of which descended into Babylon, introducing into it their old customs and ancient civilisation, and the other flowed eastward until it reached the confines of the great Chinese Empire. And so not only in writing, but in other respects, there exist many close resemblances. The Turanian, or non-Semitic form of the cuneiform characters was strongly insisted upon by the lecturer, and also the fact that the cuneiform almost always reads from left to right, though at times, herein resembling the Chinese, it was written perpendicularly. In its gradual developments the cuneiform may be divided thus:—1st, pictorial; 2nd, ideographic; 3rd, phonetic complements; 4th, pure phonetics. It never reached the dignity of an alphabet. Many of the most valuable historical and political inscriptions were engraved upon huge boulders, which marked certain agricultural boundaries.

In a very interesting lecture upon "Babylonian Art," Mr. Boscawen began with a reference to the statues which were brought to light by the French explorer, M. de Sazzec, when he discovered the ancient city of Tello. These figures date back to 2800 B.C. They are carved out of the hardest stone, and are of undoubted Turanian origin. Upon the knees of one of the figures, whose sedentary position is a sign of its divine or regal attributes, there reposes a tablet upon which is elaborately carved a plan of the city, and at its side lies a burin or graver. As the soil around Babylon is almost entirely alluvial, it is supposed that the hard diorite or porphyry stone, out of which the statues were carved, must have been procured at great expense from either the shores of the Red Sea or the distant mountains of Sinai. A resemblance which has been traced between the early Egyptian and Babylonian art has been explained by the fact that this stone came from those districts wherein were the copper mines which were worked almost entirely by Egyptians. A bas-relief, which has been preserved, not only shows considerable attainments in the art of sculpture, but also in the arts of pleasure, for it represents a procession passing along and carrying cymbals, pipes, and a harp. The use of metal always marks progress: consequently we find the Babylonians had considerably advanced in art when, as early as 2800 B.C., they were engaged in the manufacture of curious little brazen images, two or three specimens of which are to be seen in the British Museum and in the Louvre. The next advance in art is to be found in the design and execution of seals, which, highly ornamented and engraved, were very important factors in both private and national life. In conclusion, it was shown that the Babylonians could only sculpture in *relief* and not in the *round*. A few miserable attempts at the representation of the human figure in its entirety are extant, but they are few and far between, and an ancient inscription explains this, for it speaks of the robes which clothed the rough-hewn figure whose head and beard were carefully and most elaborately finished.

In a lecture on the subject of Babylonian libraries Mr. Boscawen alluded to the discovery within the last few months of 200,000 tablets, which had for ages been buried beneath the mound of Tel Ibrahim, and which went far to prove the existence of libraries and the universality of literature and education in ancient Babylonia. Education, indeed, was, as amongst the Chinese of the present day, the great central aim of life, the temples were the sources and the mainspring of all literature and art, and the priests were the teachers of both the Babylonian and Assyrian youth. Each of the great priest-cities had its own school of thought, its own system of education, its own gods, and its own theology. There were five great library cities, Borsippa, Kutha, Larsa, Eridu, and Babylon itself. The library at Borsippa was the most universal, and taught almost all subjects, secular even more than sacred. Its tablets or books were chiefly upon astronomical and astrological subjects, and more than one was a treatise on medicine. The library of Larsa, according to tablets discovered by Mr. Loftus in 1852, consisted almost entirely of mathematical and geometrical works which show how far advanced the Babylonians were in these abstruse subjects. In Eridu, the oldest city of Babylon, and which was considered the great centre of learning, the God of Wisdom was worshipped together with his son, Merodach. Here have been discovered many magnificent magical and religious hymns, one of which contains a touching and eloquent aspiration after perfect purity. Within the library of Kutha, the city out of which the Samaritans originally came, and which was sacred to the God of Death, most important tablets relating to the religion and theology of the Babylonians, have been found. It is here that the beautiful legend originated, which appears in a series of tablets under the title, "Descent of Ishtar," and records the descent of an ancient goddess into the infernal regions and her passing along that dark road upon which no return journey is ever made. Alluding to the great difference between Assyrian and Babylonian libraries, the lecturer pointed out that the one was established and kept up by royalty, the other by the people themselves. The system of arranging and cataloguing a Babylonian library was so perfect that to this day it is adopted by the authorities at the British and other museums with regard to the collections of these old tablets that may happen to be within their walls. The lecturer added that there must still be buried yet older versions and tablets than those which have already been discovered, and further exploration is absolutely necessary to throw light upon a subject so deeply interesting and of which so little is comparatively known as that which treats upon the existence of libraries in the dead and buried cities of ancient Babylon.

In his concluding lecture upon Babylon and its civilisation, Mr. Boscawen spoke of its powerful influence upon the civilisation of other lands. The lecture was divided into four parts. In the first the lecturer informed his hearers how Babylon had provided many other countries with a system of writing. The cuneiform comprised seven different languages. Assyria was the first country that copied Babylonian civilisation, and it was in consequence deeply indebted to it for its own advanced culture. Then in its conquests around it spread Babylonian civilisation far and wide, so far indeed that cuneiform inscriptions have been found by the side of Lake Van, in Armenia, so widely that both the Persians and the Cappadocians made great use of the cuneiform characters. In the second part Mr. Boscawen spoke of the basis of Assyrian art upon that of Babylon, though, indeed, the Assyrians greatly improved upon the crude and rather conventional ideas of the captured country. Like the Babylonians, the Assyrians rarely produced figures in the round, but the bas-reliefs of both nations were very elaborate, and displayed the greatest possible finish and delicacy of design and execution. Portraiture was an art carefully cultivated in Babylon, although it was almost entirely neglected by the Assyrians, who, like the Arabs of the present day, had an invincible objection to portraying the features of their notabilities, considering it boded great ill-luck and misfortune. Some small figures that have recently been discovered in the Palace of Khorsabad are very beautifully carved, and are almost the only specimens we possess of their sculptures in the round. Literature was discussed under the third heading. We owe a great debt to the Assyrians in that they have preserved to us a great amount of Babylonian literature, for when, from political motives, they established the great library at Nineveh they sent down scribes to make accurate copies of the Babylonian tablets. Amongst those which were thus duplicated were the Penitential Psalms, the product of the Schools of Northern Babylon, and which betray a strong Semitic influence, both in language and ideas. Under the last heading, that of Religion, it was pointed out how very close was the resemblance of the Jewish ritual to that of Babylon. The Babylonians without doubt originated the Sabbath of the Jews, for every seventh day was appointed to be kept holy, and these were called "The days of the Rest of the Heart."

The temple service of the altar included the sin offering, free-will offering, shew-bread, &c. The Talmudic or later law of the Hebrews betrays the strongest resemblance to that of the Babylonians, showing that in their captivity in Babylon the Jews had learned much of their captors.

THE ACTION OF WATER UPON LEAD PIPES.

DR. W. R. THOMAS, senior physician to the Sheffield Public Hospital, in the course of a clinical lecture on "Lead Poisoning from Drinking Water," reported in the *Lancet* for April 7th, said:—Water generally contains a certain amount of carbonic acid. This acid acts upon the inner surface of the pipe, forming an insoluble internal coat of oxy-carbonate of lead, which effectually prevents the water from further acting upon the pipe. Hence old pipes which have been down for years are far less dangerous than new ones. Water which contains lime salts, as the carbonates and sulphates, also assists in forming an internal insoluble coat, as the carbonates and sulphates unite with the lead. New pipes are apt to be acted upon by the oxygen which the water contains; a soluble oxide is formed, which contaminates the water. The nitrites, nitrates, and chlorides found in water contaminated by sewage are very injurious, as they dissolve the lead; so also peat and other vegetable matter have

a similar deleterious effect. The Sheffield water from a certain source is acid, and most certainly dissolves the lead. The water in other towns has had a similar effect upon the lead. For some time the inhabitants of Keighley suffered from plumbism, as we do now, from drinking-water. Mr. Jarmaine, of Huddersfield, recommended the authorities of Keighley to use limestone to counteract the acidity of the water. This was placed in conduits, and the water was allowed to pass over it. They have found at Keighley that it has been necessary occasionally to add quicklime to aid the limestone, especially in summer, when the water is scarce. This plan, which has been adopted at Keighley and found to succeed, is now being tried in Sheffield, and I trust it will be equally successful here. It is a matter of vast importance to the town of Sheffield, as the drinking-water containing lead is now giving rise to a great amount of disease and suffering.

PROPOSED AMENDMENT OF THE EMPLOYERS' LIABILITY ACT.

THE EMPLOYERS' LIABILITY FOR INJURIES TO WORKMEN BILL.

The following is the text of the Government Bill "to consolidate and amend the law relating to the liability of employers for injuries to their workmen," brought in by the Home Secretary, the Attorney-General, and other members of the Government:—

"Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1.—*Liability of Employers for Personal Injury to Workman.*

Where, after the commencement of this Act, personal injury is caused to a workman,—

(*a*) By reason of any defect in the condition or arrangement of the ways, works, machinery, plant, buildings, or premises connected with or used in the business of the employer, and the defect, or the failure to discover or remedy the defect, arose from the negligence of the employer or of some person entrusted by him with the duty of seeing that such condition or arrangement is proper; or

(*b*) By reason of the negligence of any person in the service of the employer to whom the employer has delegated superintendence over the workman, where the negligence occurred whilst that person was in the exercise of that superintendence; or

(*c*) By reason of the negligence of any person in the service of the employer to whose orders or directions the workman at the time of injury was bound to conform and did conform, where the injury resulted from his having so conformed; or

(*d*) By reason of the act or omission of any person in the service of the employer done or made in obedience to any rule or by-law of the employer, or to particular instructions given by the employer or any person delegated with the authority of the employer in that behalf, where the rule, by-law, or instructions was or were improper or defective; or

(*e*) By reason of the negligence of any person in the service of the employer who has the charge or control of any signal, points, engine, machine, or train upon a railway or tramway;

The workman, or in case of death his representatives, shall, subject to the provisions of this Act, have the same right of compensation and remedies against the employer as if the workman had not been a workman of nor in the service of the employer, nor engaged in the work.

Provided as follows:—

(1.) In an action against an employer under this Act a workman shall not, by reason only of his continuing in the employment of the employer with knowledge of the defect, negligence, act, or omission, which caused his injury, be deemed to have voluntarily incurred the risk of the injury.

(2.) A workman shall not be entitled under this Act to any right of compensation or remedy against his employer in any case where he knew of the defect, negligence, act, or omission which caused his injury, and failed without reasonable excuse to give or cause to be given within a reasonable time, information thereof to his employer or to some person superior to himself in the service of his employer.

(3.) Where a rule or by-law has been approved or accepted as a proper rule or by-law by one of Her Majesty's Principal Secretaries of State, or by the Board of Trade, or any other Department of the Government, under or by virtue of any Act of Parliament, it shall not be deemed, for the purposes of this Act, to be an improper or defective by-law.

(4.) An action under this section shall lie against the representatives of a deceased employer.

2.—*Position of Workman under Contractor or Sub-contractor.*

Where the execution of any work is being carried into effect under any contract, and

(*a*) The person for whom the work or any part thereof is done, owns or supplies any ways, works, machinery, plant, buildings, or premises used for the purpose of executing the work; and

(*b*) By reason of any defect in the condition or arrangement of such ways, works, machinery, plant, buildings, or premises, personal injury is caused to any workman employed by the contractor or by any sub-contractor; and

(*c*) The defect or the failure to discover or remedy the defect arose from the negligence of the person for whom the work or any part thereof is done, or of some person being in his service and entrusted by him with the duty of seeing that such condition or arrangement is proper,

The person for whom the work or that part of the work is done shall be liable to pay compensation for the injury as if the workman had been employed by him, and for that purpose shall be deemed to be the employer of the workman within the meaning of this Act.

Provided that—

(i.) Any such contractor or sub-contractor shall be liable to pay compensation for the injury as if this section had not been enacted, so however that double compensation shall not be recoverable for the same injury; and

(ii.) This section shall not affect any rights or liabilities of the person for whom the work is done and the contractor and sub-contractor (if any) as between themselves.

3.—*Avoidance of Contracts Surrendering Benefits of Act except on Good Consideration.*

(1.) Any contract made after the commencement of this Act, whereby a workman deprives himself of any right under this Act, shall be void, unless it is made in consideration of such undertaking by the employer as hereinafter mentioned, and that undertaking has been duly fulfilled.

(2.) The undertaking shall be to make, so long as the workman continues in his employment, an adequate contribution towards such insurance as hereinafter mentioned of the workman or his representatives against every accident occurring in the course of his employment, and to make good to the workman, or, in case of death, his representatives, any sum which becomes payable in respect of the insurance, but which is not paid.

(3.) The insurance shall be to such amount and on such conditions as will, having regard to the whole scope of the indemnity thereby given, and having regard to the proportion borne by the number of accidents in case of which the employer is liable to pay compensation under this Act to the number of accidents which are the subject of insurance, insure to the workman, or, in case of death, his representatives, a benefit equivalent to the compensation recoverable under this Act.

(4.) If any question arises whether an undertaking by an employer sufficiently complies with the requirements of this section, evidence that a similar undertaking has been accepted as sufficient by persons employed under similar circumstances or in the same class of employment shall be admissible as evidence of the sufficiency of the undertaking.

(5.) On the application of a workman in any coal mine, metalliferous mine, factory, or workshop, or of his employer, one of Her Majesty's Principal Secretaries of State, and on the application of a workman in any other employment, or of his employer, the Board of Trade, may consider and decide whether a contract made or proposed to be made between the workman and his employer whereby the workman deprives himself of any right under this Act, is made, or proposed to be made, on such consideration as in this section mentioned, and if the Secretary of State or Board of Trade decide and certify that the contract is so made, or is proposed to be so made, then not only that contract, but contracts in similar terms with other workmen engaged under the same employer or his successor in business and in a similar employment under similar circumstances, shall, without further proof, be deemed to have been made on such consideration as in this section mentioned.

(6.) The compensation payable in pursuance of the insurance may be either a capital sum or an annual or other periodical payment to the person injured or his representatives.

4.—*Notice before Action for Compensation.*

(1.) Subject to the provisions of this section, an action for compensation under this Act for an injury sustained by a workman in the course of his employment shall not be maintainable against the employer of the workman, unless notice that injury has been sustained is given within three months from the occurrence of the accident causing the injury.

(2.) The notice shall give the name and address of the person injured, and shall state in ordinary language the cause of the injury and the date at which it was sustained, and shall be served on the employer, or, if there is more than one employer, on one of the employers.

(3.) If the employer is an individual, the notice may be served—

(*a*) By delivering the notice to the employer, or

(*b*) By leaving the notice at the employer's usual or last known place of residence or place of business, or

(*c*) By forwarding the notice by post by a registered letter addressed to the employer at his usual or last known place of residence or place of business.

(4.) If the employer is a body of persons corporate or unincorporate, the notice may be served by delivering it at, or by sending it by post in a registered letter addressed to, the office, or, if there is more than one office, any one of the offices of that body.

(5.) If the notice is served by post, it shall be deemed to have been served at the time when the letter containing it would be delivered in the ordinary course of post; and, in proving the service, it shall be sufficient to prove that the notice was properly addressed and registered.

(6.) The want or insufficiency of the notice required by this section shall not be a bar to the maintenance of an action for the recovery of compensation for the injury if the court, or, in case of appeal, the court hearing the appeal, is of opinion that there was reasonable excuse for the want or insufficiency, and that the defendant has not been thereby prejudiced in the defence.

5.—*Time for bringing Action.*

An action against an employer for compensation under this Act for an injury to a workman occurring in the course of his employment shall not be maintainable unless commenced within six months from the occurrence of the accident causing the injury, or, in case of death, within twelve months from the time of death.

6.—*Mode of Trial.*

(1). Every action under this Act against an employer for compensation for an injury sustained by a workman in the course of his employment shall be brought in a county court, but may, on the application of either plaintiff or defendant, be removed into a superior court, in like manner and on the same conditions as an action commenced in a county court may by law be removed.

(2.) On the trial of any such action in a county court before the judge without a jury, one or more assessors may be appointed for the purpose of ascertaining the amount of compensation.

(3.) For the purpose of regulating the conditions and mode of appointment and remuneration of such assessors, and all matters of procedure relating to their duties, and also for the purpose of consolidating any actions under this Act in a county court, and otherwise preventing multiplicity of such actions, rules and regulations may be made, varied, and repealed from time to time in the same manner as rules and regulations for regulating the practice and procedure in other actions in the county court.

7.—*Provision as to Special Defence.*

If the defendant in any action against an employer for compensation for an injury sustained by a workman in the course of his employment intends to rely for a defence on the want of notice or the insufficiency of notice, or on the ground that he was not the employer of the workman injured, he shall, not less than seven days before the hearing of the action, or such other time as may be fixed by the rules regulating the practice of the court in which the action is brought, give notice to the plaintiff of his intention to rely on that defence, and the court may, in its discretion, allow an adjournment of the case for the purpose of enabling such notice to be given.

8.—*Limit of Sum Recoverable as Compensation.*

The amount of compensation recoverable against an employer for an injury sustained by a workman in the course of his employment shall not exceed either such sum as may be found to be equivalent to the estimated earnings during the three years preceding the injury of a person in the same grade employed during those years in the like employment, and within the district in which the workman is employed at the time of the injury, or *one hundred and fifty pounds*, whichever is larger.

9.—*Deductions from Compensation.*

(1.) There shall be deducted from any compensation awarded to a workman or his representatives against his employer in respect of an injury sustained by him in the course of his employment:—

(*a*) So much of any money paid to the workman or his representatives in respect of the injury under an insurance to which the employer has contributed as is attributable to the employer's contribution; and

(*b*) Any penalty or part of a penalty paid in pursuance of any other Act of Parliament to the workman or his representatives in respect of the same cause of action.

(2.) Where an action has been brought by a workman or his representatives for compensation for an injury sustained by him in the course of his employment, and payment has not previously been made of any penalty or part of a penalty under any other Act of Parliament in respect of the same cause of action, the workman or his representatives shall not be entitled thereafter to receive any penalty or part of a penalty under any other Act of Parliament in respect of the same cause of action.

10.—*Apportionment of Compensation.*

Where compensation is awarded in case of the death of a workman for an injury sustained by him in the course of his employment, the amount recovered, after deducting the costs not recovered

from the defendant may, if the judge so directs, be divided between the wife, husband, parent, and child of the deceased in such shares as the judge, with or without assessors, as the case may be, or, if the action is tried by a jury, as the jury may determine.

11.—*Provision as to Common Law Right.*

Where any personal injury is caused to a workman by reason of any wrongful act, neglect, or default of his employer in connexion with the work in which the workman was employed, and the workman is, or, in case of death, his representatives are, entitled, independently of this Act, to any compensation from the employer, an action for the compensation may be brought in the like court and in the like manner, but within the same time and after the same notice as if it had been brought under this Act, and shall not be brought otherwise, and the same action may include a claim for any such compensation as aforesaid, and also a claim for any compensation recoverable under this Act.

Further clauses of the Bill provide for the application of the Act to seamen, and to Scotland and Ireland, and there are defining and saving clauses. The expression "workman" is defined not to include "a domestic or menial servant, nor a clerk or agent." If passed, the Act is to come into force on January 1st, 1889. The Bill has been petitioned against by the Central Association of Master Builders of London, by the Master Builders' Association of Liverpool, by the Master Builders' Association of Wolverhampton, by the Institute of Builders, by the Master Builders' Association of Derby, by the Master Builders' Association of Cambridge, and by other associations of employers.

THE EMPLOYERS' LIABILITY ACT (1880) AMENDMENT BILL (No. 2).

This is a second Bill to amend the Employers' Liability Act, 1880, and has been prepared and brought in by Mr. Burt, Mr. Broadhurst, and other members of the House of Commons. The Bill is a short one, and it provides as follows:—

1.—*Amendment of Act.*

The first section of the Employers' Liability Act, 1880 (hereinafter called the principal Act), shall be construed as if in lieu of subsections (2), (3), and (5) of that section there were inserted the following:—

(2.) By reason of the negligence of any person in the service of the employer.

This section shall apply only in the case of accidents occurring after the *passing of this Act.*

2.—*Limit of Compensation.*

The amount of compensation recoverable under the principal Act or this Act shall not exceed *five hundred* pounds.

The third section of the principal Act shall be repealed.

3.—*Contract Excluding Provisions of Principal Act void.*

The provisions of the principal Act and this Act shall have effect and be enforced by every court in every case, notwithstanding any contract or agreement excluding all or any of the provisions of the said Act or this Act, or otherwise interfering with the operation thereof:

Provided (1) that this Act shall not affect any contract or agreement made before the *passing of this Act;* and

(2.) That in determining in any case the amount of compensation payable by an employer, the court shall take into consideration the value of any payment or contribution made by such employer to or for the injured person in respect of his injury, and also the value of any payment or contribution made by such employer to any insurance fund or compensation fund, to the extent to which any person who would otherwise be entitled to compensation has actually received compensation out of such payment or contribution at the expense of such employer.

4.—*Liability of Employer not removed by reason of Sub-contracts.*

Where under the provisions of the principal Act a person has a right of action against an employer who is a sub-contractor, he shall also have the same right of action against any superior contractor, and such superior contractor shall be entitled to be indemnified by the sub-contractor in respect of the negligence of whom or of whose servants the cause of action arises. This section shall apply only in the case of accidents occurring after the *passing of this Act.*

5.—*Court empowered to dispense with or amend Defect in Notice.*

The notice required by the fourth section of the principal Act may be given at any time within three months after the occurrence of the accident. The absence of or any imperfection in such notice shall not be a bar to action, but shall be a ground for depriving the plaintiff of costs if and so far as the court in its discretion so directs.

6.—*Illegitimacy.*

Where personal injury to a workman who is illegitimate results in death, the same rights of compensation shall exist for the benefit of his father or mother or of brothers and sisters by the same father and mother as if he and such brothers and sisters were legitimate.

7.—*Action in Superior Court.*

No appeal shall be brought from any judgment, whether of a county court or a superior court, except where the sum recovered exceeds *two hundred pounds*, without special leave of the court to which the appeal is to be brought, and that court may direct as a condition of giving such leave that the cost of the application for leave and of the appeal, or any part thereof, shall in any event be paid by the appellant.

8.—*No Appeal, except by consent, unless amount exceeds one hundred pounds.*

An action shall not, except by consent, be removed into a Superior Court unless the amount claimed exceeds *one hundred pounds.*

9.—*Application of Act.*

The principal Act and this Act shall apply to all servants, whether employed on land or at sea.

10.—*Construction.*

This Act and the principal Act shall be construed as one Act.

WILLENHALL SEWERAGE SCHEME.

A LOCAL GOVERNMENT BOARD inquiry was held at the Town-hall, Willenhall, on the 10th inst., by Major-General Phipps Carey, R.E., with reference to the application of the Local Board for sanction to borrow 17,000*l.* for works of sewerage and sewage disposal, and for purposes connected therewith, for the Local Board District of Willenhall. There were present Mr. J. C. Tildesley, J.P., Chairman of the Board; Mr. D. W. Lees, Chairman of the Sewage Committee; Mr. John Clark, Clerk; Mr. B. Baker, Engineer; Mr. John Baker, Assistant Engineer, and other gentlemen. The Inspector asked if there was any opposition to the application. The Clerk replied that he thought not, and proceeded to state particulars in support of the application. He said that in 1883 Major Tulloch held an inquiry on behalf of the Local Government Board, the result being that sanction was given for the purchase of 32 a. 2 r. 35 p. of land, on the Walsall-road, for sewerage purposes, and it was a most eligible site. Subsequently an arbitration took place respecting the purchase of the land from Lord Lichfield, the award being that the Board should pay 5,030*l.* for the land, also the umpire and arbitrator's fees, together with the tenants' compensation, the total being 5,411*l.*, which sum was borrowed by sanction of the Local Government Board, repayable in instalments extending over thirty years, at 3½ per cent. interest. The loan of 17,000*l.* which they were now seeking sanction for included 15,000*l.* for works of sewage, and 2,000*l.* for costs of the arbitration. An estimate of the cost of the proposed works, together with the plans and report, had been prepared by the engineer, Mr. B. Baker, the Town Surveyor, and sent to the Local Government Board. The Inspector observed that the plans were of a most satisfactory character, and had been very carefully prepared. Mr. Baker then explained the plans, and gave details of the proposed works. He stated that in 1871 the population numbered 18,146, including Short Heath, which had since been separated from Willenhall. In 1881 the population was 16,067, and that it was now 16,286 in 3,344 houses, giving an average of 4·82 to each house; the population was slightly increasing. Mr. Lees observed that a large number of the mining population had left the district to secure work elsewhere, and the town was now mainly dependent on its staple hardware trades. The area of the Local Board district is 1,249 acres, and the drainage area 450 acres, and for sewage purposes had been divided into three divisions, viz., Little London and Spring Bank, with 558 houses and a population of 2,825, and a drainage area of 66 acres. Portobello, with 425 houses and a population of 1,940, and an area of 28 acres; and the town proper, with 2,361 houses and a population of 11,503, and an area of 356 acres. The average rainfall for three years was 33·75 inches. The rateable value of the district was 34,494*l.*, and the general district rates amounted to 2s. 8d. in the pound per annum. The poor-rate was 5s. in the pound. The Inspector asked the engineer upon what basis the estimate had been prepared, and Mr. Baker replied that his estimate had been based upon the current prices of the locality. The Inspector observed that the estimate was very low for the works, and suggested that 10s. per cent. should be added for contingencies and inquiry charges, and expressed himself satisfied with the scheme. He subsequently visited the farm and the different localities of the town, and traversed the line of main sewers. The result of the inquiry will be made known in due course.

THE CONDITION OF ST. GEORGE'S HALL, LIVERPOOL.

SIR,—As the design of parts of this building has been under discussion, the few remarks which I wish to make upon its present condition will, if interesting, be also timely.

There are not so many of the present generation of architects who remember the great interest that was felt in St. George's Hall while it was in building, and when it was new. Having no connexion with commerce, and not finding Liverpool on my way to any place that specially attracted me, this was the one thing that drew me there in 1857, when it had been opened some three years. The younger, and as some would say, the more ardent spirits amongst us were then looking to Gothic as the style of the future. Speakers at our meetings, at Association and Museum, panted and almost wept with emotion while dwelling upon its beauties. But here was a work of grand dimensions, nobly situate, generously carried out, which seemed to be the bright expiring spark of classical art deceiving its votaries with hopes of renewed life. The early death of its young designer, and its completion under the greatest professor of that style then living, gave interest and a sort of romance disarming criticism. I well remember its effect on my own mind as it stood out in the freshness of its clean new stone. It gained nothing from atmospheric effects, for the day was of the gloomiest, so that down by the river I could not see 100 yards into the fog. Perhaps, however, a sunny chromo-lithograph that I brought away with me is responsible for the impression of St. George's Hall that has glowed in my imagination for four-and-thirty years. I see now that I was only acting in the spirit of a sentence which I copy from my *Builder* for May 30th, 1857:—"Its magnificent Town-hall is of itself worth a journey."

It was with great pleasure that I saw my way to bring Liverpool into a round of visits during the last Christmas vacation. But I shall never forget the first sight of St. George's Hall on the raw December morning. What I saw was a gloomy pile, black with the smoke of seven-and-thirty years, for I cannot suppose that during all that time, which is more than a generation, anything has been done to remedy the effects of the atmosphere which Liverpool enjoys. The beautiful columns, designed with all the nicety as to modules and minutes which we can imagine,—are smirched from top to bottom in great broad white streaks by the pigeons which congregate there. The sea-nymphs and their male companions that rest on low pedestals at the further end of the building are made hideous by inky streams that have flowed down the sheltered parts of their faces and bodies. Equestrian statues of the Queen and the Prince Consort stand out before the principal flank. They are not incrusted with grime as a London statue of their age would be, nor indeed is the building so foul, as a whole, as the London atmosphere would have made it, for though Liverpool is getting on very nicely it is not yet of metropolitan magnitude. These statues may be called a bluish-black, and what struck me was the extremely little difference in depth of tone that exists between the bronze and the building under what is, I fear, a rather common condition of air and light. It is a minor matter, but in certain parts there was observable that very curious condition under which the surface of wrought stone becomes loosened in great flakes of half an inch in thickness, quite irrespective of the line of bed, so that it is ready to strip off and fall at a touch.

Under fresh conditions queer ideas strike you. As I stood examining the rough discoloured surface of one of these columns I remembered the time,—over a quarter of a century ago,—when I graved certain initials upon the bole of a fine beech, cutting down broad and deep through outer bark and inner bark to the white

surface of the sap wood, and I thought I would repeat them on this ample surface, slightly altered though they have been. So, taking my white linen handkerchief, I did my best to clean down through enough of the annual layers of dirt to make my ⊢ clearly visible,—but it was no use. The effect on the handkerchief was, however, conspicuous enough, and herein I thought, may lie the germ of an idea. Here is a building so carefully designed and wrought, claiming kinship with a noble classical example, costing I know not how many hundred thousand pounds, belonging to a forward and flourishing city that has its art galleries and public libraries and reading-rooms for the delight of its citizens and of mere transient strangers like myself, and it is no more cared for than if it were All Souls', Langham-place, or the British Museum, or the lower half of St. Paul's Cathedral! Why not, now and then, turn a strong jet from a fire-engine upon it, using, if necessary, some mild detergents? I am credibly informed that a jet of moist steam would bring off such dirt as this in big flakes, but in some way it must be possible to so operate upon it that natives and strangers may,—say half a dozen times in a century,—see St. George's Hall as its designer* imagined it, and the town built and paid for it, and as every lover of Classical architecture would like to see a noble building with such a permanent place in the history of English art.

THOMAS BLASHILL.

April 17th, 1888.

THE "HEIM" SYSTEM OF HEATING.

SIR,—Your correspondent, in your issue of the 14th inst., has evidently been at great pains to understand and describe the above system, as witnessed by himself in operation in Vienna. My object in asking you to insert this letter in your next publication is not to criticise that system, and I will only remark as to it that after a careful perusal of Mr. J. Russell Endean's letter, I can see no new principle, nor novel development of a principle, and that I believe there are many examples now in use for introducing from a central position fresh air warmed by contact with hot-water pipes, steam pipes, and even by the old-fashioned "cockles," which will hold their own, if they do not surpass, the system of Herr Heim, as described by your correspondent.

But my protest is directed specially against the last paragraph of Mr. Endean's letter, which, with your permission, I will quote in full for the information of your readers, who may not have seen your issue of the 14th :—

"The School Board for London is constantly dealing with cases of inefficient heating in numberless schools and class-rooms; it has therefore determined to give Herr Heim the opportunity to make a fair trial in both forms of his patent; of the stoves in rooms wherein every system yet tried has failed, and of the central heating, in a new school about to be built, the plans of which will provide the necessary arrangement, so as to give to the system a most thorough and complete test."

With the decision of the School Board I have no right to cavil, but only to hope that the proposed experiment may have more useful result.

But I do most strongly protest against Mr. Endean's statement as to "stoves in rooms wherein every system yet tried has failed," as calculated to do me personally much harm. It is very generally known that in the very large majority of the London School Board buildings,—probably in 400 buildings, counting enlargements,—my Hygiastic Ventilating Grates have alone been used. These, during a period of fifteen years, have held the first place in the estimation both of the present and late Architects to the Board, and to them I would appeal as to the truth of my statement, that I have no knowledge of any one of my grates having failed to do its work efficiently; still more, I have never heard, and do not believe, that a single one of my grates has been supplanted by another; indeed, I have fresh orders, this month, for many grates for the School Board.

As I have at the present moment several estimates under consideration, for the supply and fixing these grates in important buildings, including schools, hospitals, and numerous private houses, I feel justified in demanding from your correspondent a prompt qualification of the paragraph in question, which otherwise may lead to the rejection of my estimates, and serious pecuniary loss to myself.

D. O. BOYD.

19, *Maddox-street, W.*, April 16, 1888.

SIR,—Our attention has been drawn to a letter written by Mr. Endean on the above, and contained in your issue of the 14th inst. [p. 264]. We think it hardly fair that all heating and ventilating engineers should have to bear the blame of the inefficient systems of heating, &c., adopted by the School Board for London, since, in the majority of instances, the system has been specified by the Board. The "Heim" system is not new, and is in many respects similar to ours. By our system of heating and ventilating, we secure a uniform temperature in all parts of any building, and this without draught or varying temperature. In schools, we allow for each child per hour 650 cubic feet of air. The air entering the building is filtered, and can be disinfected if desired. All is under the perfect control of the engineer in charge, and no one else can interfere with any portion of the system. There is a total absence of empyreumatic odour and parched dryness so generally characteristic of heated air, and the air is not decomposed, nor is its salubrity impaired; and as far as the character of the heat is concerned, the system is quite unobjectionable, for it is not likely to be the cause of any injury to the inmates of any building in which it is fixed, and no doubt presents the means of effecting a more equable and general distribution of heat than is obtained with ordinary stoves. This system is now being fixed in asylums, hospitals, schools, &c., here, and on the Continent.

No. 86, Queen-street, E.C. KÖRTING BROS.

* But, as our correspondent "H" has already mentioned, much more than cleaning would be necessary to enable any one to see the building as its designer imagined it. We should need all the bas-reliefs, and the sculpture between the square columns, none of which has ever been carried out but one panel of bas-relief, and over that there was a grand quarrel and (apparently) an abandonment of the attempt.—ED.

THE CANDLE BEAM.

SIR,—The letter of your correspondent, Mr. Littlehales, opens an interesting question, and, without venturing any new theories, I may perhaps be allowed to make a few remarks on the candle-beam, and certain collateral subjects touched upon in his letter [p. 269, *ante*].

The candle-beam was a usual adjunct of the high altar in our larger churches, *e.g.*, Canterbury, where it carried a Majesty, figures of SS. Dunstan and Elfege, with seven *scrinia*, or relique-chests. At Westminster, it supported a great rood and cherubim (figured in Scott's "Gleanings from Westminster"); at Chichester, it was painted, and carried a crucifix and eight lights (*v.* Walcott's "Interior of a Gothic Minster," p. 23). But I am not acquainted with the use of our parish churches in this matter. Dr. Rock, speaking quite recently, asserts that as early as the twelfth century this beam was to be seen in our churches, stretching from wall to wall of the sanctuary, just above the east side of the high altar. He adds that the rood-beam proper, under the chancel arch, or further westward, was also called the candle-beam, on account of the candles burning there in honour of the rood ("Church of our Fathers," vol. iii., part i., pp. 470–3). This possibly accounts for the confusion which seems to hang about the subject. At Canterbury, both beams were certainly in use at the same time, viz., the rood-beam over the altar of the Holy Cross in the nave, and the beam over the high altar, of which Gervase writes, "At the eastern horns of the altar were two wooden columns, gracefully ornamented with gold and silver, and sustaining a great beam, the extremities of which rested upon the capitals of two of the pillars, *i.e.*, of the apse. "Between the columns there stood a gilded cross" (Scott's "History of English Church Architecture," p. 136). It was this beam which, in conjunction with the triptych or retable, developed into the reredos or screen wall. Du Cange (*s.v., trabes*) says that beams were often used merely to carry lights, quoting, "Fecit et duas trabes ferreas, unam in choro, aliam extra chorum ad apponendas candelas"; and again, "Trabem fusilem ex ære cum candelabris et lampadibus subter in æreis uncis dependentibus."

Your correspondent speaks of the beam as a survival of the primitive *ciborium*, in which case it must represent the architrave. A more frequent survival, however, is of the columns, so often shown at the four *cornua altaris*, surmounted by candles in old MSS. (*v.* Brit. Mus. MS., Tib. viii., p. 26). A picture in the National Gallery, by Dierich Bouts (ob. 1475) of the "Exhumation of St. Hubert," shows these columns supporting curtain rods (across the front as well as the ends of the altar), and angels with prickets for candles. The modern side curtains or wings, and the odious gas standards, are the only existing survivals of the baldacchino!

Mr. Littlehales says that we always hear of the Dove or Pyx being suspended from the roof. I think he is in error here. Ancient writers often allude to the vessel as *dependens super altare*, but without specifying how or whence it hangs. We know, however, that it was suspended by a cord and pulley *ad modum lampadis* (*Congrès Scientifique de Grenoble*, xxix., I., p. 217); and that it was reached by a rod with a hook at the end (Tarbé, *Eglises de Reims*, p. 52). There is also abundant evidence from MS. and other sources that the pyx was usually hung, not from the vault, but from a metal crane or bracket (*vide*, for illustrations, B.M. MS. 16,997, f. 119; Rohault de Fleury, *La Messe*, v., 73, and plates 374, 379; Rock, iii., pt. I., 207). An inventory of Notre Dame at Paris, dated 1532, gives "Ung repositoire, nommé ciboire, où l'on mect le Sainct Sacrement, lequel est au-dessus le grand hostel, *pendu au bout d'une crosse de cuivre.*"

Nor do I think that the position of the modern tabernacle (which, by the way, is not such an innovation as some assert) is to be attributed to the similar position of the suspended pyx, but is more probably accounted for in this way. It was customary to place the tower or cup-shaped ciborium (which latter was more common in England than the Dove), containing the Host, upon the altar during Mass, when there was to be a communion; and this it was which gave the suggestion of a fixed tabernacle at the back of the altar.

The brackets at South Hayling possibly supported a rood beam proper, which may also have served for the suspension of the Lenten veil.

There is a rood beam *in situ* at Ludham, in Norfolk, but I am unable to say how it is supported.

F. C. EDEN.

Kensington Palace, W., April 16.

JOHNSON'S HOUSE IN BOLT COURT.

SIR,—Referring to your "Note" respecting the Stationers' Company School (page 261, *ante*), I have no doubt whatever that the house occupied by Dr. Johnson in Bolt-court stood on the site of the one that faces you as you enter the court from Fleet-street, and that the foundations of that house mainly belonged to its predecessors; but there certainly was no garden attached to it after, at the latest, 1820.

The scraper of the consumed house, on which the doctor cleaned his learned shoes, was for some time in my possession, but disappeared mysteriously, whether through the agency of the dustman or a "Dryasdust-man," I could only conjecture.

Mr. Benjamin Bensley, son of Allen's successor, disposed of the printing business in 1825, and having covenanted not to carry on a similar business within fifty miles of London, settled in Andover, where he printed for some years, and where, I believe, he died.

I may mention that the business at that time was supposed to be only exceeded in extent,—at least, as far as the number of workmen was concerned,—by that of Messrs. Clowes, in Stamford-street, and that the Duke of Sussex and Lord Brougham visited the premises in 1827 to inspect the machines, one of which, the "Caroline," built by Applegath & Cowper in 1820, was engraved for the "Encyclopædia Britannica."

GODALMING.

"JOHNS' CEMENT."

SIR,—Some years ago houses were rendered outside with Johns' Cement, and as we find it impossible to repair same with any other composition, we should feel grateful if any of your numerous readers could tell us where to procure this, as we have tried through many sources and failed to trace it. We presume there is a cement now made that will work with it, though unknown to us in the country.

SUBSCRIBERS.

*** On looking back we find that the cement in question was advertised in the *Builder* for many years, and, we think, for the last time in the number for Oct. 1, 1864 (p. xvi.). The advertisement on that date reads as follows:—"Johns & Co.'s Patent Permanent Stucco Wash, Stucco Cement, and Stucco Paint.—Clark & Bengough (Manufacturers also of White Lead and Colours), Grand Surrey Canal Bridge, Old Kent-road. Office, 23, New City Chambers, 121, Bishopsgate-street Within, E.C." If the material sought for is not altogether obsolete, perhaps these particulars may enable some one to give the desired information.

Steam Boiler Explosions. — The usual fortnightly meeting of the Liverpool Engineering Society was held at the Royal Institution, Colquitt-street, on the 11th inst., Mr. Charles H. Darbishire, Assoc. M. Inst. C.E., President, in the chair, when a paper on "Steam Boiler Explosions" was read by Mr. John J. Webster, M. Inst. C.E., and discussed by the members. The paper commenced by stating that the average number of steam-boiler explosions during the last twenty-five years was about fifty-six per annum, the average loss of life amounting to about seventy per annum, and although the number of explosions was very great, and the loss of life to be deplored, the actual percentage of explosions to boilers at work was very small, being at the rate of one explosion to every 2,500 boilers at work. Owing to the good work of the different boiler associations, and to the immense improvement in the design and construction of boilers, this percentage had now been reduced to less than one in 6,000. The paper then described in detail the various causes of boiler explosions under the following heads:—(1) bad material; (2) defective design, including the mountings and fittings; (3) bad workmanship; (4) careless and improper working; (5) neglect of periodical inspection; (6) bad maintenance. The paper then described some interesting physical phenomena, which had given rise to a novel theory of boiler explosions, and after discussing the question of simultaneous boiler explosions, concluded with a brief review of the existing and proposed legislation on the subject. The paper was illustrated by numerous wall diagrams. As several members desired to take part in the debate, the discussion was adjourned.

The Student's Column.

IRON.

XVI.—COMPARATIVE MERITS OF GIRDERS SUPPORTED AND FIXED IN DIFFERENT WAYS AND SUBJECT TO A UNIFORM LOAD.

CONTINUING our investigation of the continuous girder, we will now proceed to calculate the moments, reactions, &c., first with the central column $\frac{1}{4}$ in. lower, and then $\frac{1}{8}$ in. lower than the other supports. In the case of the column being $\frac{1}{4}$ in. lower, the equation for finding the reaction of the column will be the same as in the previous article, therefore $d - d_1 = \frac{1}{4}$. $d = \frac{5\,wl^4}{384\,E\,I}$ and $d_1 = \frac{Wl^3}{48\,E\,I}$. These calculations referring to the same girder as before, d and d_1 will be the same; that is to say, $d = \cdot075$ and $d_1 = \frac{C \times 216}{108{,}000}$. Inserting these values into the equation, $d - d_1 = \frac{1}{4}$, we obtain,—

$$\cdot075 - \frac{C \times 216}{108{,}000} = \cdot02 \text{ ft.}$$

$$\therefore\ C = \frac{(\cdot075 - \cdot02)\ 108{,}000}{216} = 27{\cdot}5 \text{ tons.}$$

Reaction at $A = B = \frac{60 - 27{\cdot}5}{2} = 16{\cdot}25$ tons.

Moment at C (fig. 7) = $(16{\cdot}25 \times 30) - (30 \times 15) = 37{\cdot}5$ foot tons.

FIG 7

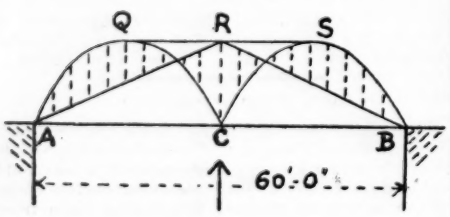


FIG 8

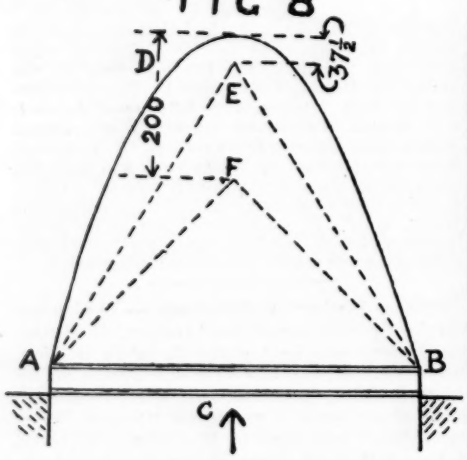
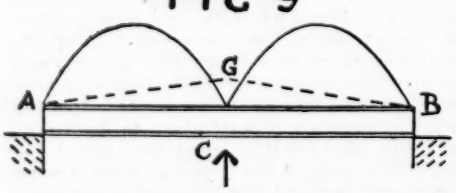


FIG 9



When the column is $\frac{1}{8}$ in. below the end support, the equation $d - d_1 = \frac{1}{8}$ in. must be satisfied, and taking the same value for d and d_1 as before,

$$\cdot075 - \frac{C \times 216}{108{,}000} = \cdot01 \text{ ft.}$$

$$C = \frac{(\cdot075 - \cdot01)\ 108{,}000}{216} = 32{\cdot}5 \text{ tons.}$$

Reaction at $A = B = \frac{60 - 32{\cdot}5}{2} = 13{\cdot}75$.

Moment at C (fig. 7) = $(13{\cdot}75 \times 30) - (30 \times 15) = -37{\cdot}5$ foot tons.

When the upper surface of the column C is on the same level as the support, the equation $d - d_1 = 0$ must be satisfied; $\therefore\ \cdot075 - \frac{C\ 216}{108{,}000} = 0$.

$$C = \frac{\cdot075 \times 108{,}000}{216} = 37{\cdot}5 \text{ tons.}$$

Reaction at $A = B = \frac{60 - 37{\cdot}5}{2} = 11{\cdot}25$ tons.

Moment at B = $(11{\cdot}25 \times 30) - (30 \times 15) = -112{\cdot}5$ foot tons, as previously found by formula $\frac{Wl}{8}$. The moments at the different points on the beam can be seen in the figs. 8 and 9. For the case where C is $\frac{1}{4}$ in. lower than the end supports, the bending moments are measured by the ordinates between the triangle A F B, and the parabola A D B, in fig. 8. Where C is $\frac{1}{4}$ in. below the end supports, the bending moments are measured by the ordinates between the triangle A E B, and the parabola A D B (fig. 8). Where C is $\frac{1}{8}$ in. below the end supports the bending moments are measured by the ordinates between the parabolas and the triangle A G B in fig. 9.

The foregoing calculations serve to show the effect of displacing the central support to the extent of a small fraction of an inch. The very considerable changes caused in the bending moments and reactions prove the desirability of fixing the girder with almost mathematical accuracy, and also the evil effect which might be produced on continuous girders by the subsidence of either support. In the case of a column which is only $\frac{1}{8}$ in. below the end supports, it can be seen by fig. 9 that the maximum bending moment is less than for three level supports, thus showing that the strength of a girder may be increased by placing the supports at different levels. The somewhat risky economy of making girders continuous over piers has probably retarded the general adoption of this form of girder in England, and led engineers to adopt more generally the non-continuous form, which not only gives far less labour in calculation, but is nowise affected by any alteration in the level of a support. In constructing bridges over several spans where the foundations are in any way insecure, the above remarks would be of great significance.

RECENT PATENTS.

ABSTRACTS OF SPECIFICATIONS.

3,264, Stoves, &c. J. Roots.

The object of this invention is to consume the smoke of the fuel burning, thus effecting a saving in the quantity burnt. In a room stove the bars in the bottom grating are wider apart than usual; the front space from the bottom of the grate to the hearth is closed by a hinged cover or slide so that the air does not enter there for combustion; or it may be closed by the front wall of a removable ash-pan. The flue is continued downward at the back of the fire to this enclosed space beneath it, the back of which space is left open to the chimney or flue. When the fire is lighted the register opening or any ordinary opening into the chimney or flue is left open until the fire is alight to enable the smoke to pass up the chimney. This is then closed; consequently all the air for combustion is then carried by the downward draught to the chimney-aperture below the fire, taking the smoke with it through the fire, consuming it in its passage.

5,211, Disinfecting Arrangement. M. A. and L. A. Skelsey.

According to this invention, an openwork metal or other receptacle containing disinfecting soap or other disinfecting substance is suspended or fixed, or forms an original and permanent part of the pans of water-closets, and this is arranged so as to receive a full flow of water when the pans are flushed.

6,548, Wall or Ceiling Papers. S. Fisher.

According to this invention, stout or dense paper is taken and coated with oxidised or thickened oil, designs are then printed upon it in colours. Canvas or linen or other substances are sometimes used to produce a roughened surface instead of grained cloth such as is ordinarily employed.

6,582, Paint, &c. P. Molyneux.

For resisting the effects of weather or the penetration of oil or turpentine, and still more especially for tanks of metal or wood in which petroleum or mineral oil is stored, a paint composed of iron forge scale, Portland cement, gum lac, and glycerine is used and is applied as paint in the usual way.

6,616, Substitute for Glass. L. Marguerie.

By this invention, a material resembling glass for glazing, said to be non-inflammable, unbreakable, and transparent, is made by immersing wire gauze or metallic cloth in a heated state into thin paste or liquor formed of soluble glass and gelatine or isinglass. These pieces are afterwards immersed in a solution of alum, and afterwards dried and coloured in various ways.

16,593, Sliding Sashes. E. Thorp.

The sashes which are the subject of this invention are retained at any elevation or moved up or down by a ratchet wheel with sight cogs working in perforations or notches on the rails of the sashes. The slide pieces are kept in their position by iron buttons.

1,918, Chimney Cowls. G. L. Berry.

To prevent the wind causing down-draughts in cowls, guards are, by this invention, provided and placed outside the longitudinal openings for the escape of smoke. As the part which is attached to the chimney tube is very narrow, there is little room for lodging soot or dust under the slits or apertures.

NEW APPLICATIONS FOR PATENTS.

April 6.—5,107, W. Nunn, Water Waste Preventers for Water-closets. — 5,121, S. Jerman, Fastening Windows.—5,142, A. Henderson, Flushing Closet-pans.

April 7.—5,165, D. Burns, Chimney Cowls.—5,169, W. Bracewell and W. Hayhurst, Cramps for Laying Flooring Boards.—5,205, C. Smiles and W. Davidson, Matchboards for Partitioning, Wainscoting, Flooring, &c.

April 9.—5,229, J. Murray, Gutters for Corrugated Roofing.

April 10.—5,317, G. Clarke, Joints or Hinges for Fanlights, Ventilators, &c.—5,328, G. Parketon, Hollow Grates,—5,332, H. Haddan, Portable and Other Bridges.—5,333, T. Lodge, Portland Cement.—5,339, C. Bradbury, Apparatus for Lifting Doors.

April 11.—5,356, P. Fyfe and J. Dobson, Fumigating and Testing Drains, Soil-pipes, &c.—5,363, S. Hazeland, Woodworkers' Plane Irons.—5,399, R. Stone, Paint.

April 12.—5,459, M. Morgan and A. Jeffery, Raising and Lowering Window-sashes, Fanlights, Skylights, &c.

PROVISIONAL SPECIFICATIONS ACCEPTED.

2,191, J. Gillingham and W. Hodgeson, Combined Mitre Block and Cramp.—2,788, T. Sergeant and W. Cook, Mitreing Machines.—2,902, F. Humpherson, Syphon Flushing-cisterns.—2,929, H. Hargrave, Chimney Tops.—3,117, J. Mulligan, Uptake Ventilators or Chimney Cowls.—3,202, W. Temple, Drying Bricks, &c.—3,209, W. Colling-Hall, Preventing the Rattle and Vibration of Windows, Sashes, &c.—3,229, W. Scott Moncrieff, Valve Water-closets.—3,324, S. Coombs, Lever Door-check. — 3,344, W. Beames and J. Madeley, Flushing-cisterns.—3,380, R. Ferens and J. Love, Gully-trap with Sink, Grate, and movable perforated Pan.—3,447, D. Gillies, jun., Axle-end Guides for Mortar and Clay Mills.—3,588, J. Wilson, Attaching Door-knobs, &c., to Spindles.—4,077, S. Hazeland, Woodworkers' Plane Irons and other Edge Tools.

COMPLETE SPECIFICATIONS ACCEPTED.

Open to Opposition for Two Months.

8,319, F. Attock, Draught and Dust Excluder for Doors, &c.—9,504, C. Norton, Window Fasteners or Catches.—11,078, T. Shelley, Securing Sheets of Zinc or Other Metal to Roofs, &c.—2,799, J. Hird and J. Ford, Fittings for Casement and Sash-Windows, Doors, &c.—3,737, H. Vaughan and W. Trubshaw, Attaching Door-knobs to Spindles.—3,794 S. Jennings, Urinal Basins.

RECENT SALES OF PROPERTY.

ESTATE EXCHANGE REPORT.

MARCH 29.

By WORSFOLD & HAYWARD.

Dover—Ground-rent of 6*l.* a year, reversion in 44 years	£180
Ground-rent of 7*l.* 10s., reversion in 44 years	220
Ground-rent of 1*l.* 15s., reversion in 7 years	285
Ground-rent of 10*l.*, reversion in 44 years	315

APRIL 9.

By J. MORGAN.

Sutton-common—The Firs, 83 years, ground-rent 7*l.* 10s	450

By DEBENHAM, TEWSON, & CO. (At Southampton).

Shirley, Hants—Twelve plots of freehold land	891

APRIL 10.

By E. E. CROUCHER & CO.

Clerkenwell—22 and 24, Pine-street; and 14 and 15, Vineyard-walk, 43 years, ground-rent 55*l.*	255

By MURRELL & SCOBELL.

City—7, St. Swithin's-lane, freehold	4,120
Mile End—107 and 109, Grove-road, 50 years, ground-rent 8*l.* 8s.	695

By DEBENHAM, TEWSON, & CO.

Hampton Wick, Cedars-road—Rudder Grange, freehold	650

By GEO. GOULDSMITH, SON, & CO.

Pimlico—Improved ground-rents of 30*l.* a year, term 49 years	675
Belgravia — 10, Belgrave-mews East, 16 years, ground-rent 16*l.*	510
3, Capener's-yard, 36 years, no ground-rent	430
Kennington—8, 9, and 10, Farnham Royal, 25 years, ground-rent 9*l.* 9s.	375

By G. A. BICKERTON.

St. John's Street-road—No. 103, 41 years, ground-rent 10*l.* 10s.	660

By ELLIS & SON.

Barnet, High-street—The residence called Tudor House, freehold	1,100
The freehold house and shop, opposite the church	960

By P. D. TUCKETT.

Islington—Ground-rent of 18*l.* a year, term 59 years	£360
Halliford-road—Ground-rent of 42*l.* a year, term 54 years	865
Downham-road—Ground-rent of 31*l.* 10s. a year, term 53¾ years	625
Downham-road—Ground-rent of 40*l.* a year, term 54½ years	810
Sherborne-street—Ground-rent of 77*l.* a year, term 54½ years	1,605

APRIL 11.

By FULLER, HORSEY, SONS, & CASSELL.

Whitechapel-road, No. 21—The lease of, term 1½ year	80

By DRIVER & PERFECT.

Finsbury Park—31, Yonge-street, 64 years, ground-rent 3*l.* 15s.	480

By HOBSON, RICHARDS, & Co.

Mile End—Ground-rents of 24*l.* 3s. a year, reversion in 2 years	1,060

APRIL 12.

By BRIANT & SON.

Vauxhall—10 to 18, Goding-street, freehold	1,770
Ground-rent of 6*l.*, reversion in 75 years	120
38, Bonnington-square, 9½ years, ground-rent 7*l.* 10s.	380
Hornsey—27, Ellenborough-road, 74 years, ground-rent 5*l.*	145
Clapham-road—7, Landor-road, freehold	570

By MULLETT, BOOKER, & Co.

Hyde Park—55, Cambridge-terrace, 44 years, ground-rent 10*l.*	1,470
St. John's Wood—66, Loudoun-road, 49 years, no ground-rent	650
64, Boundary-road, 49 years, no ground-rent	1,830
Edgware-road—15, Stourcliffe-street, 44 years, ground-rent 12*l.*	705
Hyde Park—20, Southwick-street, 48 years, ground-rent 11*l.*	1,770
29 and 31, Southwick-street; and 1, Southwick-mews, 42 years, ground-rent 14*l.*	1,020

By C. C. & T. MOORE.

Spitalfields—16 and 18, Brick-lane, freehold	1,320
St. George's-in-East—35, 37, and 39, Cannon Street-road, freehold	1,350
Clerkenwell—9 and 10, Percy-circus, 32 years, ground-rent 12*l.*	990

By NEWBON & HARDING.

Stratford—62 and 64, Leytonstone-road, freehold	1,160
1 to 5, Davy-terrace, freehold	1,720
King's-cross—129, Caledonian-road, 18 years, ground-rent 6*l.*	450
Holloway—5 to 11 odd, Sussex-road, 19 years, ground-rent 25*l.* 4s.	905
Hornsey—2, Harringay-villas, 54 years, ground-rent 15*l.*	340
Highbury—69 and 71, Highbury-quadrant, 61 years, ground-rent 15*l.*	750

By E. STIMSON.

Brixton—60, Atlantic-road, 96 years, ground-rent 9*l.* 9s.	1,100
3, Crowhurst-road, 70 years, ground-rent 5*l.*	450
Borough—13, 14, 15, and 19, Falcon-court, freehold	1,000
Peckham—46 and 48, Danby-street, 86 years, ground-rent 10*l.*	365
Old Kent-road—112, 114, 116, 120, and 122, Ormside-street; and a ground-rent of 4*l.* 10s., 71 years, ground-rent 21*l.*	700
Bermondsey—35 to 41 odd, Page's-walk, freehold, and a freehold house, shop, and stabling	1,450
Camberwell—255, Southampton-street, 8 years, ground-rent 6*l.* 10s.	75
Fitzroy-square—16, Carburton-street, 2 years, ground-rent 10*l.* 1s.	72

APRIL 13.

By W. W. JENKINSON.

Bermondsey—40, Southwark Park-road, 35 years, ground-rent 4*l.* 8s.	305

MEETINGS.

SATURDAY, APRIL 21.

Crystal Palace School of Engineering.—Award of Certificates, Easter Term. Mr. John Aird, M.P., will preside. 1 p.m.

Edinburgh Architectural Association.—Visit to the Forth Bridge.

MONDAY, APRIL 23.

Royal Institute of British Architects.—(1) Mr. F. C. Penrose, M.A., on "The Temple of Jupiter Olympius at Athens, and Some Recent Excavations on the Site." (2) Mr. J. E. Goodchild on "The Late Professor Cockerell's Connexion with the Design of St. George's Hall, Liverpool." 8 p.m.

Society of Antiquaries.—Anniversary meeting. 2 p.m.

TUESDAY, APRIL 24.

Institution of Civil Engineers.—Mr. E. B. Ellington on "The Distribution of Hydraulic Power in London." 8 p.m.

Royal Institution.—Dr. Charles Waldstein on "John Ruskin."—III. 3 p.m.

Parkes Museum (Lectures for Sanitary Inspectors).—Professor Corfield, M.A., M.D., on "Sanitary Appliances." 8 p.m.

Society of Arts (Applied Art Section).—Mr. Lewis F. Day on "Craftsman and Manufacturer." 8 p.m.

WEDNESDAY, APRIL 25.

Civil and Mechanical Engineers' Society.—Mr. J. B. Walton on "Railways for Rural and Undeveloped Districts." 7 p.m.

St. Paul's Ecclesiological Society.—Mr. Chas. Browne on "The Knight's Hospitallers." 7·30 p.m.

Liverpool Engineering Society.—(1) Nomination and Election of Officers and Council. (2) Adjourned discussion on Mr. Webster's paper on "Steam Boiler Explosions." (3, time permitting), Mr. C. F. Bamford on "Air Brakes." 8 p.m.

THURSDAY, APRIL 26.

Society for the Encouragement of the Fine Arts.—Mr. P. H. Newman on "The Permanence of Modern Stained-Glass Painting." 8 p.m.

Society of Telegraph-Engineers and Electricians.—Mr. W. H. Preece, F.R.S., on "The Risks of Fire incidental to Electric Lighting." 8 p.m.

FRIDAY, APRIL 27.

Parkes Museum (Lectures for Sanitary Inspectors).—Mr. H. P. Boulnois on "Scavenging, Disposal of Refuse, and Sewage." 8 p.m.

Miscellanea.

Proposed Memorial to the late Mr. Samuel Morley. — The late Mr. Samuel Morley took a warm interest in the work carried on in the Royal Victoria Hall, Waterloo Bridge-road, Lambeth, and came forward at a critical time in its history with a gift of 1,000*l.* towards buying the lease in 1884. But the lease which he helped to buy will expire at Christmas, 1897, and it is now suggested to make this hall one of the "People's Palaces" for South London, as part of the scheme proposed by the Charity Commission. We are given to understand that they will place it on a permanent basis if the freehold is bought. The work now carried on at the hall is to some extent identical with that at the People's Palace at Mile End, and has been growing and extending during the eight years that "the Vic." has been held by the present lessees. It is an attempt to provide amusement (free from temptations to drink) for those who desire only amusement, together with opportunities of instruction for those who wish to improve themselves. The entertainments, concerts, temperance work, and popular lectures, which go on nightly in this hall, do not comprise the whole of the work here. In rooms behind there are held a Temperance Working Men's Club, with a gymnasium and reading-room; besides this there are class-rooms where systematic instruction is given, to a great extent, in connexion with the Science and Art Department. There is also a coffee tavern open from five a.m. to twelve p.m. The popularity of the hall is shown by the fact that 1,825*l.* was taken (chiefly in pennies and twopences) during the last nine months for admissions at the doors of the hall. The Workmen's Club numbers over 150 members, and there are 192 entries to the eleven classes this session, whereas they began three years ago with one class of six members. The present value of the lease (ten years unexpired) is 4,000*l.*, this the committee freely give as their corporate contribution to the memorial. Besides this, 17,000*l.* is needed for the purchase of the freehold, law expenses, &c., and this amount must be raised before September, or the committee will have to forfeit 500*l.* already paid as deposit. It is stated that to buy this freehold was a great wish of Mr. Morley, but during his lifetime the then owner would not sell it. Now the opportunity offers to carry out his wish and the work which he did not live to finish. There is no memorial to him yet in London, and it is suggested that the building should be purchased to that end. Individual members of the committee have promised to contribute 3,500*l.*, of which 1,000*l.* is promised when the remaining 16,000*l.* is raised. All who wish to help in this memorial are invited to communicate with Miss Cons, Hon. Sec., Royal Victoria Hall, Waterloo Bridge-road, S.E.

A Prosecution under the Ancient Monuments Act.—What was perhaps the first case brought under the Ancient Monuments Act of 1882 lately came before Sheriff Mackenzie at the Lerwick Sheriff Court, when Hugh Mackay, flesher, Lerwick, was charged with injuring and defacing the brough of Clickimin and the old Pictish castle situated in a loch near Lerwick. He was also charged with stealing stones from the ruins. Accused pleaded not guilty, but it was proved that accused, who is building a stable in the vicinity, instructed his workmen to take stones from the isthmus on which the castle is situated, and which is defined in the Act as forming part of the brough. Sheriff Mackenzie characterised the offence as wanton destruction of an ancient monument. The loss was an irreparable one, which made the offence all the more grave, and as the statute gave power to prevent such depredations, it should be strictly enforced. He imposed the full penalty of 5*l.*, and ordered accused to pay a further sum of 4*l.* 10s. to defray the cost of replacing the stones removed, and failing payment, imprisonment for fourteen days.

Pamphlets.—The "Marlborough Pamphlet Case" (Gould's Patent), of which a specimen has been sent to us, is a very neat and convenient case, in the outward likeness of a book, for preserving and classifying pamphlets. The portion which forms the holder slides into the outer case, with a loop to pull it out; the whole stands as a book on the shelf, and can be labelled according to the class of pamphlets enclosed therein.

The "Doty" Light.—Some interesting experiments with a lamp, invented by Captain Doty, were lately made at the works of Messrs. Frederick Braby & Co., Limited, Deptford. It is claimed that the great advantages of the lamp to railway contractors, shipbuilders, and others engaged in large works, are its portability and economy. The lamp is made in three sizes, yielding a light equal to 300, 500, and 1,000 candle power; but it is stated that there is practically no limit to its illuminating capacity. The experiments were made with lamps of the intermediate size, and it was found that the lighting power was effective for a distance of fully 70 ft. The base of the lamp is formed by a portable oil-tank, which is supplied with oil for about half its capacity, and into this air is pumped as required, to press the oil up into the burner. When the oil reaches the burner it is passed through heated coils, and is thus converted into gas, a very small quantity of oil having to be burned to sufficiently heat the coils. The oils suitable for using in the lamp are ordinary paraffin, petroleum, and Russian, and the quantity burned in the 500 candle power lamp is stated to be about three-quarter of a gallon per hour, so that a light covering a very large area can be produced at a cost of under 6d. per hour. The Doty lamp has this further advantage, that it is self-generating, and requires no steam or other motive power, and the only attention required after lighting is that a little air shall be pumped in about every two or three hours.

Institution of Mechanical Engineers.—An ordinary general meeting of this Institution will be held on Thursday evening, the 3rd of May, and Friday afternoon, the 4th of May, at 25, Great George-street, Westminster, by the kind permission of the Council of the Institution of Civil Engineers. The chair will be taken by the President, Mr. Edward H. Carbutt, at half-past seven p.m. on Thursday evening, and at half-past two p.m. on Friday afternoon. The ballot lists for the election of new Members, Associates, and Graduates, having previously been opened by the Council, the names of those elected will be announced to the meeting. The following papers will be read and discussed, as far as time permits:—"Third Report of the Research Committee on Friction: Experiments on the Friction of a Collar Bearing"; "Description of the Emery Testing Machine," by Mr. Henry R. Towne, of Stamford, Connecticut, U.S.A.; Supplementary Paper "On the use of Petroleum Refuse as Fuel in Locomotive Engines," by Mr. Thomas Urquhart, Locomotive Superintendent, Grazi and Tsaritsin Railway, South-East Russia. The Anniversary Dinner will take place on Friday evening, the 4th of May.

Paris Universal Exhibition, 1889.—We are asked to mention that the applications from intending exhibitors for space in the British Section of this Exhibition ought all to be sent in before the end of the present month, addressed to the Offices of the Section, 2, Walbrook, E.C. They have been asked for thus early, in order that the Executive Council of the Section may be able to form an approximate idea of the actual amount of space which they should take over from the French authorities. It is stated that applications received after the 28th inst. will not be refused, but they can only be entertained subject to the possibility of space being found for them. We are informed that up to the present a satisfactory number of applications have been received, and the Executive Council anticipate that the whole of the space which can be placed at their disposal will be fully occupied.

Obituary.—We regret to hear of the death of Mr. Garrett James Barry, son and partner for the last eighteen years of Mr. T. D. Barry, architect, Liverpool. He died on the 25th of January, at Chubut, Patagonia, in his 43rd year, of a throat affection. He had for many years past taken a leading part in the practice of the firm. He had been ill for about eighteen months, and to avoid the cold of winter left in October for Buenos Ayres, where he seemed to improve in health, but very suddenly some complication of the disease arose, and in less than a week it proved fatal.

Crystal Palace School of Practical Engineering.—The certificates awarded to the students of this school for the Easter term will be announced at a meeting to be held in the lecture-room of the school, this Saturday, April 21. Mr. John Aird, M.P., will preside.

Sheffield Society of Architects and Surveyors.—The usual monthly meeting of this society was held at the School of Art on the 10th inst. There was a good attendance of members and visitors, amongst those present being Messrs. T. J. Flockton (in the chair), J. D. Webster, J. B. Mitchell-Withers, A. Scargill, J. Smith, E. M. Gibbs, J. Hall, J. Fawcett, J. T. Wheen, T. Winder, C. Gibson, H. W. Lockwood, A. J. Watson, W. J. Hale, J. E. Benton, G. F. Tevy, J. R. Wigfull, W. C. Fenton (hon. sec.), W. Radford, F. W. Banks, W. T. Campsall, A. E. Turnell, J. B. Mitchell-Withers, jun., W. Radford, C. B. Flockton, T. W. Moore, G. H. Genn, F. Toyne, and others. Letters of apology for absence were read from Mr. Charles Hadfield and Mr. F. Fowler. Mr. R. Sellors (of Worksop) was unanimously elected an associate of the society. Messrs. W. F. Hemsoll and G. F. Terry were appointed auditors for the year. Mr. J. D. Sedding, F.R.I.B.A., then gave a long and interesting lecture on "English Architecture." He showed how English architecture was mixed up with our national history; how this subject had been treated by the archæologist, the critic, the text-book makers, and the student. He deprecated the division of English architecture into different styles, such as Early English, Decorated, Perpendicular, &c., and urged that the proper mode of description would be to name the century in which the building was erected. He urged the desirability of learning the history of our old buildings from the buildings themselves, and not from books, and pointed out the rich storehouse of material for this study in the many ancient buildings in this neighbourhood in Yorkshire and Derbyshire.—On the motion of Mr. J. B. Mitchell-Withers, seconded by Mr. H. W. Lockwood, a vote of thanks was accorded to the lecturer for his address.

Vandalism by a Clergyman at Westminster Abbey.—The *Times* reports that at the Westminster Police Court on Wednesday last, the Rev. Watkin Davies, vicar of St. Bride's, Wentloog-with-Coedkernew, Cardiff, Monmouthshire, was charged before Mr. D'Eyncourt, at the instance of the Dean and Chapter of Westminster Abbey, with wilfully damaging the ancient credence table in the St. Erasmus Chapel of the Abbey. A police-constable in plain clothes deposed that he saw the defendant enter the St. Erasmus Chapel, which was sometimes called the Royal Chapel, from the north transept, and chip the base of the credence table with the end of his umbrella. The pieces of stone he knocked off he put in his pocket, and witness then took him into custody and asked him what he meant by such conduct. The defendant's answer was that he was not aware he was doing any harm, and that he had only taken a few pieces of the stone as a relic. Mr. Thomas Wright, clerk of the works at the abbey, said that many of the ancient monuments were damaged by persons chipping pieces away as relics. The pieces of stone chipped off the table, which were about the size of a walnut, were handed to his Worship ,who asked the defendant what answer he could make to such a charge. Mr. Davies said he had nothing at all to say, except that he did not know he was doing any harm. Further questioned by Mr. D'Eyncourt as to his motive, the defendant said "I was picking the pieces for relics." Mr. D'Eyncourt.—You really ought to know the value of ancient monuments and to venerate them accordingly. I must fine you 40s. for the wilful damage. [By way of comment we will only say that we think this curiously-minded clergyman has got off very cheaply.]

Robert Boyle & Son, Limited.—We are informed that the Directors of Robert Boyle & Son, Limited, ventilating engineers, of London and Glasgow, have resolved to pay an instalment on account of dividend at the rate of 12*l.* per cent. per annum, free of income-tax, for the half year ending March 31st last, payable April 23rd.

Death of a Finnish Architect.—The death is announced, at the age of fifty-four, of Herr Koustantin Kiseleff, chief architect to the Board of General Construction of Finland, and an artist of great repute. The deceased had chiefly studied in Italy and France, and was the designer of several of the most noteworthy buildings in Helsingfors.

Surveyorship, Hammersmith.—Mr. H. Mair has been appointed Surveyor to the Vestry of the Parish of Hammersmith, *vice* Mr. Henry George Bean, deceased.

Sale of the Late Mr. George Godwin's Library.—A sale of the late Mr. Godwin's effects has been going forward during the week, and on Wednesday his extensive library, containing upwards of 3,600 volumes, was disposed of. Before the sale of this portion of the property commenced, the residence itself was submitted for sale. The auctioneer stated that it was held on lease for an unexpired term of fifty-four years, at a ground-rent of 28*l.* per annum. There being no offer for it, he said he was ready to treat for its purchase by private sale, adding that it would probably be again offered at the Auction Mart in May next. The sale of the books was then proceeded with. The catalogue contained 250 lots, each lot being made up of from twelve to forty or fifty volumes of a miscellaneous character. There was a large attendance, and all the lots found ready purchasers. Amongst the lots for which there was a close competition was the first edition, in three volumes, of the "Stones of Venice," with coloured plates, by Ruskin. The first offer was 5*l.* 10s., with advances in rapid succession, and it was ultimately sold for 20*l.* The next lot, consisting of "Modern Painters," in three volumes, "Seven Lamps of Architecture," one volume, and "Two Paths," in one volume, realised 15*l.* The total proceeds of the sale amounted to between 450*l.* and 500*l.*

Glass-lined Tubes for Water.—Mr. H. Dudley Cooper (Cooper's Patent Glass-lined Tube Company) writes from 3, Dyer's-buildings, Holborn, E.C, as follows:—"In your issue of the 31st ult. [p. 228], in the proceedings of the Architectural Association, held on the 16th ult., the President, Mr. John Slater, B.A., referred to glass-lined tubing. He said:—'He exhibited last May, in the room upstairs, a glass-lined pipe, and if the invention could be practically carried out, they would have not only much cleaner pipes for water service, but pipes which would also be much less liable to corrosion and friction than any of the metal pipes with which they had to do. He had often thought what an advantage it would be if the glass-lined tube could be made practically useful for all houses.' Will you permit us to inform you that it was our glass-lined tubing that Mr. Slater was good enough to exhibit in May last, and that we are now supplying it manufactured from our works, and shall at all times be happy to see any member of the profession, and practically demonstrate to him the singular merits of the patent."

Manchester Students of the Institution of Civil Engineers.—The Association of Manchester Students of the Institution of Civil Engineers held their first annual dinner, on the 11th inst., at the Crown Hotel, Manchester. The President, Mr. Robert Vawser, M.Inst.C.E., occupied the chair, and was supported by the Past-President, Mr. J. H. Lynde, M.I.C.E., Vice-President, Mr. J. Proctor, M.I.C.E., and the following members of the Institution:—Messrs. W. Adams, A. M. Fowler, and W. B. Worthington, and eleven Associate-Members. In proposing the health of the President, the Hon. Sec. (Mr. A. D. Greatorex), Stud.I.C.E,, gave the following statistics:—The Association was formed in the winter of 1884-85 by the combined energy of seven or eight students, aided by Mr. Lynde. Since then over thirty papers have been read on almost every engineering subject, and over twenty visits have been made to engineering works, &c. The number of students on the books has been:—1885-86, 18; 1886-87, 33; 1887-88, 57; showing a very considerable increase.

The Artists' Benevolent Fund.—The Earl of Derby, K.G., has accepted the Presidentship of the Artists' Benevolent Fund, in place of the Right Hon. A. J. B. Beresford Hope, M.P., deceased. The Worshipful Company of Mercers has given 21*l.* to the Fund; and the legacy of 100*l.*, duty free, left by the late Mr. Geo. Godwin, has been received by the Fund.

The Nineteenth Century Art Society.—Thursday, the 26th inst., has been appointed for the reception of works intended for the Summer Exhibition (the fifteenth) of the Nineteenth Century Art Society, at the Conduit-street Galleries.

Granite and Marble in Vancouver.—The Canadian Correspondent of the *Liverpool Journal of Commerce* says that large quantities of granite and marble have been discovered about twelve miles from Vaucouver, easy of access.

The Approaches to Old Ford.—The Bethnal Green Vestry have just carried out an important street improvement at Old Ford, which is within the Vestry's district. Little more than twenty years ago Old Ford consisted mainly of market gardens, but these are now almost covered with houses and business premises, occupied by a population of upwards of 50,000 inhabitants. A large proportion of the residents are employed in the City and the localities immediately around it, but up to within the last week or two their only means of outlet westwards has been by two narrow thoroughfares in which a couple of vehicles could not pass each other. This inconvenience has just been removed by the Bethnal Green authorities having widened Green-street at its western portion, so that it now opens almost opposite to the spacious main road of the parish. A considerable amount of property has had to be purchased in order to effect the improvement, including a portion of the grounds of a church along the line of route, about forty houses and shops having also had to be acquired, which were all demolished to admit of the widening of the roadway. The Metropolitan Board of Works contributes one half of the cost of the improvement.

St. Anne's Home, Streatham.—This large building and grounds, on Streatham Hill, which for many years was a school for the daughters of needy and distressed clergymen of the Church of England, but which was, a short time since, vacated in consequence of a larger new home having been erected at a greater distance from London, has been purchased by the St. Pancras Guardians for parochial purposes, and is now undergoing extensive alterations and repairs, including a large amount of sanitary work. Mr. H. H. Bridgman is the architect.

Paris a Sea-port.—The question of making Paris accessible from the sea to large vessels is again on the *tapis* in certain French engineering circles. The present proposal advocates a canal from Rouen, with three locks, enabling vessels of upwards of 2,500 tons to reach Paris, the cost of the undertaking being estimated at about 5,000,000*l.* It is said that M. de Lesseps is much interested in the scheme, which is also approved of by the Government. A committee is in course of formation for elaborating the scheme.

Proposed Eye Hospital, Swansea.—A building is about to be erected in Swansea as an Eye Hospital, from the designs and under the superintendence of Mr. J. Buckley Wilson, architect, Swansea.

PRICES CURRENT OF MATERIALS.

TIMBER.	£.	s.	d.	£.	s.	d.
Greenheart, B.G. ....ton	6	10	0	7	15	0
Teak, E.I. ....load	8	0	0	12	10	0
Sequoia, U.S. ....foot cube	0	2	3	0	3	0
Birch, Canada ....load	2	15	0	4	15	0
Fir, Dantsic, &c.	2	0	0	4	0	0
Oak ,, ...	2	0	0	4	10	0
Canada	4	0	0	6	10	0
Pine, Canada red	2	10	0	3	10	0
,, yellow	2	10	0	4	0	0
Lath, Dantsic ....fathom	3	10	0	5	0	0
St. Petersburg	5	0	0	6	0	0
Wainscot, Odessa, crown....	2	10	0	3	0	0
Deals, Finland, 2nd and 1st...std.100	8	0	0	9	10	0
,, 4th and 3rd	6	10	0	7	10	0
Riga	6	0	0	7	10	0
St. Petersburg, 1st yellow	9	10	0	14	10	0
,, 2nd ,, ...	8	0	0	9	0	0
,, white	7	0	0	10	0	0
Swedish	7	0	0	15	10	0
White Sea	8	0	0	17	0	0
Canada, Pine, 1st	16	0	0	24	0	0
,, ,, 2nd....	10	0	0	15	10	0
,, ,, 3rd, &c....	7	0	0	9	10	0
,, Spruce, 1st	8	0	0	9	10	0
,, ,, 3rd and 2nd	6	0	0	7	10	0
New Brunswick, &c....	6	10	0	7	5	0
Battens, all kinds	4	10	0	11	0	0
Flooring Boards, sq., 1 in., prepared, First	0	10	0	0	12	0
Second	0	7	0	0	9	0
Other qualities	0	4	6	0	6	6
Cedar, Cuba ....foot	0	0	3½	0	0	4
Honduras, &c.	0	0	3½	0	0	3½
Australian	0	0	2½	0	0	2½
Mahogany, Cuba	0	0	4½	0	0	7
St. Domingo, cargo average	0	0	4½	0	0	6
Mexican ,, ...	0	0	4	0	0	4½
Tobasco ,, ...	0	0	4½	0	0	5½
Honduras ,, ...	0	0	4½	0	0	5½
Rose, Rio ....ton	8	0	0	11	0	0
Box, Turkey	5	0	0	13	0	0
Walnut, Italian ....foot	0	0	4	0	0	5½
METALS.						
IRON—Bar, Welsh, in London...ton	5	0	0	5	2	6
,, ,, at works in Wales ...	4	12	6	4	15	0
,, Staffordshire, London	5	10	0	7	0	0
COPPER—						
British, cake and ingot ....ton	81	0	0	0	0	0
Best selected	82	0	0	0	0	0
Sheets, strong....	88	0	0	0	0	0
Chili, bars	80	5	0	80	15	0
YELLOW METAL....lb.	0	0	7½	0	0	7½

METALS (*continued*).	£. s. d.	£. s. d.
LEAD—		
Pig, Spanish .....ton	13 17 6	0 0 0
English, common brands.....	14 2 6	0 0 0
Sheet, English	15 2 6	15 7 6
SPELTER—		
Silesian, special .....ton	18 0 0	18 5 0
Ordinary brands.....	17 10 0	17 15 0
TIN—		
Banca .....ton	165 0 0	0 0 0
Billiton	162 0 0	0 0 0
Straits	166 0 0	0 0 0
Australian	166 0 0	0 0 0
English ingots	157 0 0	0 0 0
,, bars	158 0 0	0 0 0
,, refined, in blocks	160 0 0	0 0 0
ZINC—		
English sheet .....ton	22 0 0	23 0 0

OILS.	£. s. d.	£. s. d.
Linseed .....ton	18 10 0	18 15 0
Cocoanut, Cochin	27 10 0	29 0 0
Ceylon	24 5 9	0 0 0
Palm, Lagos	21 0 0	21 10 0
Rapeseed, English pale	24 0 0	0 0 0
,, brown	22 10 0	0 0 0
Cottonseed, refined	21 0 0	21 10 0
Tallow and Oleine.....	25 0 0	45 0 0
Lubricating, U.S.....	5 0 0	6 0 0
,, refined.....	5 0 0	13 0 0
TURPENTINE—		
American, in casks .....cwt.	1 8 6	0 0 0
TAR—		
Stockholm .....barrel	0 15 0	0 15 6
Archangel	0 10 0	0 10 6

COMPETITIONS, CONTRACTS, & PUBLIC APPOINTMENTS.

Epitome of Advertisements in this Number.

COMPETITIONS.

Nature of Work.	By whom required.	Premium.	Designs to be delivered.	Page.
Schools, Boarding House, &c., Coventry	Trustees, Bablake B. C.	50*l.* and 25*l.*	May 29th	xi.
School Buildings, Bishopwearmouth	Sunderland School Bd.	50*l.* and 20*l.*	June 1st	ii.
Designs for Cottage Homes, &c.	Wolverhampton Grdns.	Not stated	June 14th	ii.
Plans for Main Intercepting Sewer, &c.....	Otley-in-Wharfedale L B	100 guineas	August 1st	ii.

CONTRACTS.

Nature of Work, or Materials.	By whom required.	Architect, Surveyor, or Engineer.	Tenders to be delivered.	Page.
Road-making and Paving Works	Hammersmith Vestry...	*Official*	April 25th	ii.
Road Materials, &c.....	Barnet Local Board.....	W. H. Mansbridge	April 27th	xii.
Alterations, "Railway Tavern," Vict. Docks	A. Bywater.....	E. Monson, Jun.	do.	xi.
Asphalte Tar Paving.....	Walthamstow Local Bd.	H. S. Ridings.....	do.	ii.
Making-up Roads	do.	do.	do.	ii.
Painting, Colouring, &c., Infirmary.....	St. Marylebone Grdns.	*Official*	April 30th	xi.
Painting, Whitewashing, &c., Schools	do.	do.	do.	xi.
Pump-House, &c.....	Hertford Corporation...	W. H. Wilds.....	May 1st	xii.
Laying Water-Supply Pipes, Battersea Park	Met. Board of Works...	*Official*	do.	xi.
Road-Making and Paving Works	Fulham Vestry	J. P. Norrington	May 2nd	xii.
Sewage Tanks, &c.....	Wanstead Local Board	*Official*	May 4th	xi.
Pipe-Sewers, &c.	Bermondsey Vestry.....	G. Elkington.....	May 7th	xi.
Repairing and Re-gravelling Roads.....	St. Giles's, Camberwell, Burial Board	*Official*	do.	i.
Construction of Aqueduct	Manchester Watrwks C.	G. H. Hill	May 15th	xii.
Broken Guernsey Granite	Chelmsford Local Brd.	*Official*	May 16th	xi.
Erection of Hospital.....	Met. Asylums Board ...	A. & C. Harston	May 26th	xii.
Main Drainage Works	Richmond Main Sew. B.	J. C. Mellis	June 4th	xii.
Enlargement of School, Hammersmith	School Brd. for London	*Official*	Not stated...	xi.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Applications to be in.	Page
Borough Surveyor.....	Hastings Cor.	400*l.*	May 7th	xiv.

TENDERS.

[Communications for insertion under this heading must reach us *not later than* 12 *Noon on Thursdays*.]

AUDENSHAW. — For sewering, draining, kerbing, paving, and flagging Howard-street, Groby-road, Gower-street, and Enville-street. Mr. J. H. Burton, surveyor, Ashton-under-Lyne :—

Worthington & Pownall, Rusholme-road, Manchester, accepted at per schedule of prices.

[Ten tenders were received.]

BATTERSEA.—For engineering work for the new Battersea Public Baths. Messrs. Rowland Plumbe, Horace T. Bonner, and Charles Jones, joint architects :—

Keith, Arbroath	£2,000 0 0
Rosher, Westminster.....	1,970 0 0
Bradford, Holborn	1,946 0 0
Young & Co., Pimlico.....	1,750 0 0
Hodge & Co., London.....	1,650 0 0
Rosser & Russell, Charing-cross.....	1,577 0 0
Murdock & Ross, Glasgow	1,450 0 0
Comyn, Ching, & Co., London.....	1,292 0 0
J. & F. May, Holborn	1,240 0 0

BRIGHTON.—For new front and additions to Fine Art Studio, East-street. Messrs. Dovey, Howell, & Dovey, architects, 114, Queen's-road, Brighton :—

T. Griffiths.....	£340 0 0
J. Anscombe.....	314 0 0
Garrett Bros. (accepted)	313 0 0

CATFORD BRIDGE.—For making road and sewer on the Grange Estate, Catford Bridge, for Mr. Henry Smallman. Mr. Frederick Stocker, surveyor, Lewisham :—

Fullbrook & Co.	£529 16 3 !
Oliver	350 0 0
W. Nicholls	300 0 0
T. Adams	274 0 0
W. Harris.....	270 0 0
Woodham & Fry.....	253 0 0
G. Neal & Co. (Limited), Wandsworth-common (accepted).....	203 0 0 !

CHESHAM.—For erecting new boot factory, Town's End-road, Chesham, for Mr. Jos. Glasgow. Mr. G. H. Green, architect, Chesham :—

W. C. Harding.....	£600 0 0
Fredk. Darvell, jun.	426 0 0
A. Mead (accepted)	465 0 0
Job Wright (withdrawn)	377 10 0

COLCHESTER.—For alterations to the Rink, Colchester, for the "Salvation Army." Mr. E. J. Sherwood, architect and surveyor, 101, Queen Victoria-street, London, E.C. :—

W. A. Chambers, Colchester	£319 0 0
F. J. Coxhead, Leytonstone.....	239 0 0

CLAPHAM.—For alterations and repairs to Dudley House, Nightingale-lane, Clapham, S.W., for Mr. J. O'Connor. Mr. J. William Stevens, architect and surveyor, 21, New Bridge-street, E.C. :—

Maxwell Bros., Brixton.....	£764 0 0
Smith & Son, Upper Norwood.....	718 0 0
Prestige & Co., Pimlico.....	687 0 0
A. White & Co., Rotherhithe	579 0 0

EGHAM. — For the erection of a pair of villa residences in the St. Jude's-road, Englefield-green, Egham, for Mr. Payne :—

Simpson & Co.	£1,950 0 0
Norris	1,879 0 0
Oades Bros.	1,768 8 8
Bone.....	1,550 0 0

GREAT YARMOUTH.—For the erection of a new girls' school and alterations to Board Schools at Cobholm Island, Great Yarmouth. Messrs. Bottle & Olley, architects, Yarmouth :—

Rand & Cooper	£2,157 5 0
G. Springall	2,151 0 0
R. Davy	2,096 17 0
J. P. Knights.....	2,040 10 0
J. Batchelor	2,040 0 0
Thos. Howes	2,030 0 0
J. S. Cooper	2,027 0 0
G. T. Flaxman	2,009 0 0
Cork & Beech.....	1,988 0 0
T. G. Leggett.....	1,957 0 0
James Leggett	1,923 0 0
J. F. W. Bray	1,909 0 0
Grimble & Watts (accepted)	1,843 10 0
Gunston & Durrant.....	1,809 5 6

[All of Yarmouth].

HULL.—For the alteration and extension of the Watts Ward, for the Board of Management of the Royal Infirmary, Hull. Messrs. H. Saxon Snell & Son, architects, London :—

Jackson & Son, 36, Witham, Hull (accepted)	£1,590 0 0

IPSWICH.—For house and shop, for Mr. Scheuerman, Carr-street. Mr. T. W. Cotman, architect :—

T. Bennett, Ipswich.....	£1,830 0 0
R. Girling, Ipswich	1,698 0 0
Grimwood & Sons, Sudbury*	1,675 0 0

* Accepted.

IPSWICH.—For first block of houses and shops, for the Carr-street Improvement Company. Mr. H. M. Eyton, architect :—

R. S. Smith, Ipswich	£4,050 0 0
F. Bennett, Ipswich	3,756 0 0
T. Parkington, Ipswich	3,700 0 0
R. Girling, Ipswich	3,597 0 0
Grimwood & Son, Sudbury	3,499 0 0
G. Kenny, Ipswich	3,199 0 0
A. Coe, Ipswich (accepted)	2,821 0 0

ISLE OF WIGHT.—For road, sewer, and other works on the West Hill House Estate, West Cowes, for the United Land Company, Limited, 33, Norfolk-street, Strand, London :—

John H. Corke, Southsea.....	£1,050 0 0
E. Beaton, Fratton.....	1,000 0 0
George Hayter, Southsea	873 0 0
S. Saunders, Fulham	839 0 0
E. G. Perkins, Lymington, Hants ...	834 15 0
Fred. S. Coker, Newport, Isle of Wight	824 10 0
Thomas P. Hall, Southsea	819 15 0
John Meader, Jun., West Cowes, Isle of Wight.....	818 0 0
W. H. Saunders, Bournemouth	773 0 0
Wm. Neave & Son, Paddington	770 0 0
Thomas Adams, Kingsland	748 10 0
W. G. Walton & Co., Kilburn.....	747 0 0
Morgan, Isted, & Morgan, Southampton	727 0 0
Crook & Smith, Southampton.....	697 0 0
James Kingswell, Calbourne, Isle of Wight	680 0 0
James Ball & Son, West Cowes, Isle of Wight (accepted)	656 0 0

KETTERING.—For the erection of a villa residence in the Headland-road, for Mr. R. Wallis Wells. Mr. H. A. Cooper, architect :—

John Bellamy, Kettering (accepted)...	£620 0 0

KETTERING. — For the erection of two villa residences in the Broadway, for Mr. F. Spence. Mr. H. A. Cooper, architect. Quantities supplied by architect :—

Bricklayer, Stonemason, Plasterer, and Slaters' Work.

Wm. Clow, Broughton	£443 10 0
Margetts & Neal, Kettering.....	432 0 0
Jno. Bellamy, Kettering	430 0 0
Hy. F. Henson, Kettering.....	409 15 0
Dickins & Mutton, Kettering	409 0 0
Ed. Barlow, Rothwell.....	401 0 0
Alf. Barlow, Kettering	397 10 0
John Coltman, Kettering	397 0 0
C. & F. Henson, Kettering	388 0 0
Geo. Henson, Kettering (accepted) ...	380 0 0

Plumber, Glazier, and Painters' Work.

A. S. Nixon, Kettering	146 0 0
Frank Spence, Kettering	137 17 0
A. G. Dorr, Kettering	118 0 0
E. Cooper & Sons, Kettering*	115 0 0
E. Nichols, Northampton.....	114 18 0
Isitt & Williams, Kettering.....	114 6 0
W. W. Bolton, Raunds.....	110 0 0

* Accepted.

KILBURN.—For the erection of "Barracks" buildings, for the Salvation Army, in Percy-road. Quantities by the architect, Mr. E. J. Sherwood, 101, Queen Victoria-street, E.C. :—

Wicks, Willesden Park	£1,444 0 0 !
Fordham, West Hampstead	1,123 0 0
Dawes, Westminster	1,069 0 0
Hunt, Bow-common.....	1,064 0 0
Chinchen, Kensal-green.....	1,049 10 0
Tout, Hendon	1,018 0 0
Turner, Limited, Watford.....	1,006 0 0
Nash, Kensington.....	1,000 0 0
Staines & Son, Great Eastern-street	994 0 0
Battley, Old Kent-road	970 0 0
Dabbs, Stamford Hill.....	959 0 0
White, Shepherd's-bush.....	900 0 0
Coxhead, Leytonstone.....	794 0 0 !

LONDON. — For additional stabling, Penton-place, Newington Butts, for the London General Omnibus Company, under the superintendence of Mr. G. F. Lanham :—

Garrud	£597 0 0
Toms	532 0 0
Hunt	490 0 0
Haynes	485 0 0
Evans	479 0 0
Britton	462 0 0
Knight	450 0 0
Geo. Parker, Sumner-road, Peckham (accepted)	429 0 0

LONDON.—For the erection of nine houses in Oakley-place, Old Kent-road, for Mr. H. Goddard. Mr. C. W. Lovett, architect :—

Geo. Parker, Sumner-road, Peckham (accepted)	£3,050 0 0

LONDON.—For erecting warehouses in Castle-street, Finsbury, for Sir Sydney Waterlow, Bart.. Messrs. Davis & Emanuel, 2, Finsbury-circus, E.C., architects. Quantities by Mr. Frederick Downing, 7a, Whitehall-yard, S.W. :—

B. Hosegood	£6,200 0 0
John Mowlem & Co.....	6,000 0 0
G. S. S. Williams & Son.....	5,970 0 0
King Bros. & Co.	5,896 0 0
W. Shepherd.....	5,785 0 0
Ashby Bros.	5,748 0 0
John Grover & Son	5,664 0 0
Holliday & Greenwood	5,577 0 0
Harris & Wardrop, Wallwood-street, Limehouse (accepted).....	5,543 0 0

MARYLEBONE.—For the erection of a mortuary and coroner's court, for the Vestry of St. Marylebone. Messrs. H. Saxon Snell & Son, architects, London :—

Patman & Fotheringham, 100, Theobald's-row, W.C.	£3,520 0 0
Kirk & Randall, Woolwich	3,487 0 0
Lascelles & Co., 121, Bunhill-row, E.C.	3,419 0 0
Mowlem & Co., Millbank, Westminster	3,357 0 0
Ward, Clarke, & Co., New Cross	3,295 0 0
E. Toms, Wellington-street, N.W....	3,256 0 0
Wall Bros., Carlton Works, Carlton-road, Kentish Town (accepted) ...	3,189 0 0

MOUNTFIELD (Sussex).—For alterations and additions at The Banks, Mountfield, Sussex, for Mr. C. A. Egerton. Mr. Arthur Wells, architect, Hastings :—

Blackman & Sons, Catsfield (accepted)	£1,129 10 0

[Not including bricks and tiles.]

PONTYPRIDD.—For the erection of Pontypridd Free Library. Messrs. Potts, Sulman, & Hennings, architects :—

Chas. Jenkins & Son, Porth	£2,500	0	0
John Allen & Sons, Kilburn	2,411	0	0
Crisp Bros.	2,350	0	0
Howell & Son, Bristol	2,291	0	0
Thos. Rees, Merthyr Vale	2,197	18	0
W. Cowlin & Sons, Bristol	2,154	0	0
W. Williams, Pontypridd	2,103	17	10
W. Seaton, Pontypridd	2,100	0	0
W. Symonds, Canton, Cardiff	2,089	19	0
W. Bower & Co., Hereford	2,072	0	0
J. Allen, Cardiff	2,050	14	9
G. Griffiths, Pontypridd	2,002	8	7
Jenkins Bros., Swansea	1,995	14	8
E. Hatherly, Cardiff	1,987	0	0
C. Turner & Son, Cardiff	1,936	3	5
C. Edwards, Leominster	1,889	0	0
M. Julian, Pontypridd (accepted)	1,759	0	0

POPLAR.—For the re-construction of the old main sewer, in West Ferry-road, Poplar, for the Metropolitan Board of Works. Sir J. W. Bazalgette, engineer :—

J. B. Botterill	£1,669	0	0
Thomas Adams	1,448	0	0
J. Mowlem & Co.	1,348	0	0
Geo. G. Rutty (accepted)	1,299	0	0

RUSHDEN (Northants). — For levelling, draining, laying-out site, and erecting chapel, lodge, &c., for new cemetery for the Wellingborough Rural Sanitary Authority. Mr. H. A. Cooper, architect. Quantities supplied by architect :—

	Buildings.			Levelling, &c.
John Allen, Higham Ferrers	£989	3	.....	—
C. Bayes, Rushden	880	0	.....	—
Geo. Dawkins, Wellingborough	850	0	.....	£450
Clayson Bros. Rushden	847	0	.....	270
R. Marriott, Wellingborough	840	0	.....	310
Fred. Barlow, Rothwell	837	0	.....	252
Hy. Sparrow, Rushden	800	0	.....	—
Geo. Henson, Wellingborough	800	0	.....	300
Thos. Wilmott, Rushden	—		.....	229
Freeman & Son, Denford, Northants (accepted)	769	0	.....	224

SHEPHERD'S-BUSH.—For building new stabling at the Seven Stars Tavern, Goldhawk-road, Shepherd's-bush, W., for Mr. Thomas Eades. Messrs. Lee, Bros., & Pain, architects, 8, Adelphi-terrace, W.C. :—

Stathey Bros.	£770	0	0
Hunt	668	0	0
Turtle & Appleton, Wandsworth	637	0	0
C. Dearing & Son, Islington*	625	0	0

* Accepted.

SOUTH KENSINGTON. — For rebuilding new premises, 159 and 161, Fulham-road, South Kensington, for Mr. W. Jones. Messrs. Pooley & Follett, architects :—

C. Wall	£3,387	0	0
W. Eyears	3,169	0	0
Lawrence & Son	3,082	0	0
H. Bailey	3,054	0	0
Stimpson & Co.	2,883	0	0
Patman & Fotheringham	2,825	0	0
J. Chappell	2,709	0	0
Simmonds Bros. (accepted)	2,498	0	0

SPITALFIELDS. — For alterations and repairs to No. 23, Lamb-street and 123, Commercial-street, E. Mr. J. William Stevens, architect and surveyor, 21, New Bridge-street, E.C. :—

A. White & Co., Rotherhithe	£1,063	0	0
J. Smith & Son, Norwood Junction	969	0	0
J. & C. Bowyer, Upper Norwood	953	0	0
Howard & Co., Covent-garden	875	0	0
Peppiatt, Hoxton	875	0	0

STRATFORD.—For the erection of new premises, No. 320, High-street, Stratford. Mr. Charles A. Legg, architect, 13, Grafton-street, Mile End. Quantities by Mr. W. Hawker :—

Doubleday	£1,050	0	0
Taylor	1,050	0	0
Hearle & Son	983	0	0
Hawkings	973	0	0
Sabey	949	0	0
F. & F. J. Wood	945	0	0
Holland	913	0	0
Hood	895	0	0
Lusk	850	0	0
Coulsell Bros.	844	0	0
Nicholls (accepted)	795	0	0

WANSTEAD (Essex).—For two shops, at Wanstead, Essex, for Mr. Sawyer. Messrs. Bressey & Liddon Walters, architects and surveyors :—

Scott	£2,463	0	0
Osborn	2,080	0	0
Mundy	1,750	0	0
Reed	1,679	0	0
Jolliffe	1,625	0	0
Catley (accepted)	1,596	0	0

WOLVERHAMPTON.—For the erection of house in Ruby-street, for Mr. B. Davis. Mr. Joseph Lavender, architect, Bank-buildings, Wolverhampton. Quantities supplied by the architect :—

H. Gough	£288	0	0
B. Guest	270	0	0
B. Rollins	270	0	0
J. Jones, Dudley-road (accepted)	269	10	0

WOLVERHAMPTON.—For the erection of seventeen artisans' dwellings, in Thornley-street, for the Wolverhampton Building Company, Limited. Mr. Joseph Lavender, architect, Bank-buildings, Wolverhampton :—

Wm. Shepherd, Wolverhampton (accepted)	£2,550	0	0

Public Baths, Battersea.—Mr. Geo. Parker, of 124, Sumner-road, Peckham, asks us to state that the lowest tender in this competition (see list published in last week's *Builder*, p. 272) was not his, as he did not submit a tender at all.

SUBSCRIBERS in LONDON and the SUBURBS, by prepaying at the Publishing Office, 19s. per annum (or 4s. 9d. per quarter), can ensure receiving "The Builder" by *Friday Morning's post*.

TO CORRESPONDENTS.

Registered Telegraphic Address, "THE BUILDER, LONDON."

A. W.—F. B. (our correspondent is perfectly correct: it is necessary to have an overflow or safety pipe from the hot-water system).—C. S.—D. O. B.—M. M.—"Experientia" (you do not appear to know what "architecture" means).—C. P. C. (should send address and also amount of tender).—Lists of tenders received too late from W. J. E., and P. & D.

All statements of facts, lists of tenders, &c., must be accompanied by the name and address of the sender, not necessarily for publication

We are compelled to decline pointing out books and giving addresses.

NOTE.—The responsibility of signed articles, and papers read at public meetings, rests, of course, with the authors.

We cannot undertake to return rejected communications.

Letters or communications (beyond mere news-items) which have been duplicated for other journals, are NOT DESIRED.

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IMPORTANT COMMUNICATION.—FIRE AT WHITELEY'S.

WILLIAM WHITELEY, Westbourne Grove,
London, Oct. 12th, 1887.

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(*Signed*) WILLIAM WHITELEY.

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